1995

Field independence-dependence, self-concept and playfulness in preadolescents.

Sandra Leanne. Bosacki
University of Windsor

National Library of Canada

Acquisitions and Bibliographic Services Branch

395 Wellington Street
Ottawa, Ontario
K1A 0N4

Bibliothèque nationale du Canada

Direction des acquisitions et des services bibliographiques

395, rue Wellington
Ottawa (Ontario)
K1A 0N4

Your file Votre référence

Our file Notre référence

NOTICE

The quality of this microform is heavily dependent upon the quality of the original thesis submitted for microfilming. Every effort has been made to ensure the highest quality of reproduction possible.

If pages are missing, contact the university which granted the degree.

Some pages may have indistinct print especially if the original pages were typed with a poor typewriter ribbon or if the university sent us an inferior photocopy.

Reproduction in full or in part of this microform is governed by the Canadian Copyright Act, R.S.C. 1970, c. C-30, and subsequent amendments.

AVIS

La qualité de cette microforme dépend grandement de la qualité de la thèse soumise au microfilmage. Nous avons tout fait pour assurer une qualite supérieure de reproduction.

S'il manque des pages, veuillez communiquer avec l'université qui a conféré le grade.

La qualité d'impression de certaines pages peut laisser à désirer, surtout si les pages originales ont été dactylographiées à l'aide d'un ruban usé ou si l'université nous a fait parvenir une photocopie de qualité inférieure.

La reproduction, même partielle, de cette microforme est soumise à la Loi canadienne sur le droit d'auteur, SRC 1970, c. C-30, et ses amendements subséquents.

Canada

FIELD INDEPENDENCE-DEPENDENCE, SELF-CONCEPT AND PLAYFULNESS IN PREADOLESCENTS

by

Sandra Leanne Bosacki

A Thesis
Submitted to the Faculty of Graduate Studies and Research
through the Faculty of Education in Partial Fulfillment
of the Requirements for the Degree of
Master of Education at the University of Windsor

Windsor, Ontario, Canada

1995

ISBN 0-612-01434-7

Name SANDRA LEANNE BOSACKI

Dissertation Abstracts International is arranged by broad, general subject categories. Please select the one subject which most nearly describes the content of your dissertation. Enter the corresponding four-digit code in the spaces provided.

EDUCATION PSYCHOLOGY

SUBJECT TERM

0525

SUBJECT CODE

U·M·I

Subject Categories

THE HUMANITIES AND SOCIAL SCIENCES

COMMUNICATIONS AND THE ARTS
Architecture 0729
Art History 0377
Cinema 0900
Dance 0378
Fine Arts 0357
Information Science 0723
Journalism 0391
Library Science 0399
Mass Communications 0708
Music 0413
Speech Communication 0459
Theater 0465

EDUCATION
General 0515
Administration 0514
Adult and Continuing 0516
Agricultural 0517
Art 0273
Bilingual and Multicultural 0282
Business 0688
Community College 0275
Curriculum and Instruction 0727
Early Childhood 0518
Elementary 0524
Finance 0277
Guidance and Counseling 0519
Health 0680
Higher 0745
History of 0520
Home Economics 0278
Industrial 0521
Language and Literature 0279
Mathematics 0280
Music 0522
Philosophy of 0998
Physical 0523
Psychology 0525
Reading 0535
Religious 0527
Sciences 0714
Secondary 0533
Social Sciences 0534
Sociology of 0340
Special 0529
Teacher Training 0530
Technology 0710
Tests and Measurements 0288
Vocational 0747

LANGUAGE, LITERATURE AND LINGUISTICS
Language
- General 0679
- Ancient 0289
- Linguistics 0290
- Modern 0291

Literature
- General 0401
- Classical 0294
- Comparative 0295
- Medieval 0297
- Modern 0298
- African 0316
- American 0591
- Asian 0305
- Canadian (English) 0352
- Canadian (French) 0355
- English 0593
- Germanic 0311
- Latin American 0312
- Middle Eastern 0315
- Romance 0313
- Slavic and East European 0314

PHILOSOPHY, RELIGION AND THEOLOGY
Philosophy 0422
Religion
- General 0318
- Biblical Studies 0321
- Clergy 0319
- History of 0320
- Philosophy of 0322

Theology 0469

SOCIAL SCIENCES
American Studies 0323
Anthropology
- Archaeology 0324
- Cultural 0326
- Physical 0327

Business Administration
- General 0310
- Accounting 0272
- Banking 0770
- Management 0454
- Marketing 0338

Canadian Studies 0385
Economics
- General 0501
- Agricultural 0503
- Commerce-Business 0505
- Finance 0508
- History 0509
- Labor 0510
- Theory 0511

Folklore 0358
Geography 0366
Gerontology 0351
History
- General 0578
- Ancient 0579
- Medieval 0581
- Modern 0582
- Black 0328
- African 0331
- Asia, Australia and Oceania 0332
- Canadian 0334
- European 0335
- Latin American 0336
- Middle Eastern 0333
- United States 0337

History of Science 0585
Law 0398
Political Science
- General 0615
- International Law and Relations 0616
- Public Administration 0617

Recreation 0814
Social Work 0452
Sociology
- General 0626
- Criminology and Penology 0627
- Demography 0938
- Ethnic and Racial Studies 0631
- Individual and Family Studies 0628
- Industrial and Labor Relations 0629
- Public and Social Welfare 0630
- Social Structure and Development 0700
- Theory and Methods 0344

Transportation 0709
Urban and Regional Planning 0999
Women's Studies 0453

THE SCIENCES AND ENGINEERING

BIOLOGICAL SCIENCES
Agriculture
- General 0473
- Agronomy 0285
- Animal Culture and Nutrition 0475
- Animal Pathology 0476
- Food Science and Technology 0359
- Forestry and Wildlife 0478
- Plant Culture 0479
- Plant Pathology 0480
- Plant Physiology 0817
- Range Management 0777
- Wood Technology 0746

Biology
- General 0306
- Anatomy 0287
- Biostatistics 0308
- Botany 0309
- Cell 0379
- Ecology 0329
- Entomology 0353
- Genetics 0369
- Limnology 0793
- Microbiology 0410
- Molecular 0307
- Neuroscience 0317
- Oceanography 0416
- Physiology 0433
- Radiation 0821
- Veterinary Science 0778
- Zoology 0472

Biophysics
- General 0786
- Medical 0760

EARTH SCIENCES
Biogeochemistry 0425
Geochemistry 0996
Geodesy 0370
Geology 0372
Geophysics 0373
Hydrology 0388
Mineralogy 0411
Paleobotany 0345
Paleoecology 0426
Paleontology 0418
Paleozoology 0985
Palynology 0427
Physical Geography 0368
Physical Oceanography 0415

HEALTH AND ENVIRONMENTAL SCIENCES
Environmental Sciences 0768
Health Sciences
- General 0566
- Audiology 0300
- Chemotherapy 0992
- Dentistry 0567
- Education 0350
- Hospital Management 0769
- Human Development 0758
- Immunology 0982
- Medicine and Surgery 0564
- Mental Health 0347
- Nursing 0569
- Nutrition 0570
- Obstetrics and Gynecology 0380
- Occupational Health and Therapy 0354
- Ophthalmology 0381
- Pathology 0571
- Pharmacology 0419
- Pharmacy 0572
- Physical Therapy 0382
- Public Health 0573
- Radiology 0574
- Recreation 0575
- Speech Pathology 0460
- Toxicology 0383

Home Economics 0386

PHYSICAL SCIENCES
Pure Sciences

Chemistry
- General 0485
- Agricultural 0749
- Analytical 0486
- Biochemistry 0487
- Inorganic 0488
- Nuclear 0738
- Organic 0490
- Pharmaceutical 0491
- Physical 0494
- Polymer 0495
- Radiation 0754

Mathematics 0405
Physics
- General 0605
- Acoustics 0986
- Astronomy and Astrophysics 0606
- Atmospheric Science 0608
- Atomic 0748
- Electronics and Electricity 0607
- Elementary Particles and High Energy 0798
- Fluid and Plasma 0759
- Molecular 0609
- Nuclear 0610
- Optics 0752
- Radiation 0756
- Solid State 0611

Statistics 0463

Applied Sciences

Applied Mechanics 0346
Computer Science 0984
Engineering
- General 0537
- Aerospace 0538
- Agricultural 0539
- Automotive 0540
- Biomedical 0541
- Chemical 0542
- Civil 0543
- Electronics and Electrical 0544
- Heat and Thermodynamics 0348
- Hydraulic 0545
- Industrial 0546
- Marine 0547
- Materials Science 0794
- Mechanical 0548
- Metallurgy 0743
- Mining 0551
- Nuclear 0552
- Packaging 0549
- Petroleum 0765
- Sanitary and Municipal 0554
- System Science 0790

Geotechnology 0428
Operations Research 0796
Plastics Technology 0795
Textile Technology 0994

PSYCHOLOGY
General 0621
Behavioral 0384
Clinical 0622
Developmental 0620
Experimental 0623
Industrial 0624
Personality 0625
Physiological 0989
Psychobiology 0349
Psychometrics 0632
Social 0451

Abstract

The primary purpose of this paper was to investigate the relationships between field independence-dependence (FI-FD), self-concept and playfulness in preadolescent girls and boys. Sixty-three sixth-grade students (33 girls, 30 boys) from four classes in three schools in Southwestern Ontario participated in the study, with each student completing the Group Embedded Figures Test (GEFT; Witkin, Oltman & Raskin, 1971) and the Self-Esteem Inventory (SEI; Coopersmith, 1967). The students' current teachers (2 female, 2 male) and those from the previous year (2 female, 3 male) completed the Playfulness-NonPlayfulness Scale (PF-NonPF; Lieberman, 1977a). Contrary to prediction, no significant gender differences or correlations were found between the total scores of the three main variables. The hypothesis that field independence is negatively associated with self-concept and playfulness among girls was supported by significant negative correlations found between field independence and self-concept, and field independence and playfulness. In contrast, the hypothesis that field independence would be positively associated with self-concept and playfulness among boys was only partially supported by significant positive correlations found between field independence and self-concept whereas field independence and playfulness were not found to be related. The hypotheses were further supported by subsequent analyses which demonstrated a trend for FI girls and FD boys to report lower feelings of self-worth and to be rated as less playful by their teachers as compared to FD girls and FI boys respectively. The pedagogical implications of the results were reviewed followed by the main conclusion that gender

differences in preadolescence regarding cognitive style, self-concept and playfulness are largely due to socializing pressures from parents, teachers, peers and the media to conform to socio-cultural gender-role stereotypes. Thus, the sparsity of past evidence combined with the contradictory results from the present study points to the need for further research in the area of social-cognitive development in preadolescence.

ACKNOWLEDGEMENTS

I am grateful to my advisor, Dr. Wilf Innerd for his guidance and support throughout this endeavour. I would also like to thank the other two members of my Thesis Committee, Dr. Shelagh Towson and Dr. Sue Murphy whose backgrounds in psychology provided me with valuable insights and advice. Furthermore, I wish to thank Dr. Erica Kuendiger for her personal time and expertise involving SYSTAT. Finally, a special thanks goes out to Mr. Chuck Smith and to all the principals, teachers and students who participated in this study. Without their cooperation, the completion of this thesis would not have been possible.

Most importantly, I wish to thank my parents and sister Leslie, for their unconditional emotional support throughout the writing of this project. Their understanding and encouragement to keep a "playful attitude" gave me the inner strength and motivation which enabled me to complete this study.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

INTRODUCTION

General Statement of the Problem

The school is a complex and demanding social world that requires children to develop both cognitive and social skills. The acquisition of such skills enables children to cope with the growing world around them and to perform competently in social interactions (Rubin, Lemare, & Lollis, 1990). The primary goal of educators should therefore be to provide opportunities for optimal development in both the academic and social areas.

The importance of the integration of cognitive and affective domains in education has been paralleled by the recent interest in social cognitive development (Damon & Hart, 1990) in both females and males. The past decade has seen a surge of educational research on children's social concepts based on the theoretical writings of cognitive psychologists such as Bruner (1969), Piaget (1960), and Vygotsky (1966), with the majority of social cognitive research having occurred within the context of children's play (Bandura, 1977; Damon, 1977; Fischer, 1980; Selman, 1980). Due to the increase in reflective/abstract thought (Piaget, 1962) among young adolescents and the subsequent internalization of their playful behaviour in terms of an attitude or personality trait referred to as playfulness (Garvey, 1977; Lieberman, 1977b; Vygotsky, 1966), there exists a lack of information on play in preadolescents. Lieberman (1977b) contends that this personality trait of playfulness consists of manifest joy, sense of humour and spontaneity (physical, cognitive and social) and

represents underlying cognitive and affective processes.

Social cognitive functioning or social role-taking in children is a series of complex phenomena which illustrate how an individual perceives other people and comes to understand their thoughts, emotions, intentions and viewpoints (Dodge, 1983). Researchers have just begun to study the role social-cognitive processes play in determining social behaviour and the construction of the self. To achieve social competence and a positive self-concept, children must be capable of effectively evaluating and responding to social dilemmas based on accurate encoding and interpretations of social cues (Dodge & Feldman, 1990). Therefore, through investigations of children's cognitive abilities and social experiences, educators may begin to recognize and understand the critical role social cognitions play in subsequent social and emotional functioning. This role is critical because social cognitive processes provide the foundation for social and cognitive competence, which is a major determinant of self-confidence (e.g., Rubin, LeMare, & Lollis, 1990).

The cognitive abilities that develop during childhood and adolescence, such as differentiation, integration and perspective taking, are prerequisites for self-organization (Oosterwegel & Oppenheimer, 1993). According to Sigel's (1970) distancing model, the development of self-organization is partly determined by the child's ability to psychologically separate or become consciously aware of her/his own self as separate and distinct from others. Sigel believes that the ability to exist as a subject within a world of other subjects or to differentiate between self and object and emerge as a separate psychological entity is necessary for the development of

representational competence or the ability to develop symbolic representation.

The execution of social-psychological distancing relies on the child's preferred way of perceiving, organizing and retaining information (Messick, 1976). These selected cognitive processes or cognitive styles reflect the child's unique ability to understand, think, remember, judge and solve problems (Saracho, 1989). Cognitive operations enable children to obtain and structure or selectively filter (White, 1971) social information which allows them to experience self-distancing events.

The accomplishment of the task of self-object differentiation or psychological distancing (Sigel, 1970) may be influenced by specific cognitive styles. In particular, the construct of field independence-dependence represents the ability to separate an element from an embedding context and experience a separate sense of self in relation to others (Witkin & Goodenough, 1977; 1981). Witkin (1950) relates one's perception of the world to one's perception of oneself. In other words, the child must be capable of distinguishing between what is self and what is external to self. Moreover, Haakin (1988) claims that the field independent-dependent dimension suggests a pattern that characterizes the organization of perceptual experiences, connecting the inner world (self-system) and outer reality.

The development of the self-concept as a cognitive process of separation and individuation (Mahler, Pine, & Bergman, 1975) allows the child to construct and maintain stable images of the self and other. While many theorists view the self-concept as a multidimensional cognitive schema that organizes memories about the self and processes self-relevant information (Campbell, 1990; Markus & Nurius,

1986; Marsh, Byrne, & Shavelson, 1988), affect and self-evaluation (self-esteem) have also been argued to play a critical role in the self-structure (e.g., Rogers, 1981; Tesser & Campbell, 1983). This component of the self reflects one's attitudes or feelings about the self when it is viewed as an object of evaluation (Coopersmith, 1967; Rosenberg, 1979).

The emergence of self-recognition (Amsterdam, 1972) and evaluation occurs during Mahler's (1963) rapprochement phase (15-24 months), in concordance with the inception of symbolic thought (Piaget, 1962). The child creates internalized symbolic structures to represent the world and thus is able to engage in beginning pretence or make-believe play (Bruner, 1962). These mental representations provide the basis for sociodramatic or thematic fantasy play characterized by role-playing, concentration and attention to detail (Johnson, Christie & Yawkey, 1987). Symbolic or imaginative play can therefore be viewed as a critical foundation for social and intellectual competence.

The period of early adolescence (11-13 years) is a critical time for both cognitive and social development, consisting of both the onset of abstract thought (Piaget, 1962) and the increase of social self-consciousness (Rosenberg, 1979; Sullivan, 1953). Blos (1962) contends that early adolescence is the second process of individuation when the self-structure is reorganized and consolidated. Adolescents find themselves in conflict due to the paradoxical tasks of cognitive integration of the self (Erikson, 1951) and social differentiation (Bernstein, 1980; Harter, 1986). While adolescents strive to achieve autonomy and to construct a coherent, psychosocial

identity, they may experience an increased sense of personal agency and social self-consciousness (Broughton, 1980; Selman, 1980). This acute sense of self-awareness and reflectivity may thus lead to inconsistencies and disturbances within the self-system (Rosenberg, 1989).

Furthermore, the psychological changes that occur during early adolescence may also be a result of gender-role intensification which includes the emphasis of traditional gender-role behaviour and attitudes (e.g., Newson & Newson, 1987). Social pressures from peers, parents and teachers to conform to stereotypic gender-roles may lead to altered self-definitions and changes in preadolescents' expectations of theirselves and others. Such societal factors may have an influence on the way in which preadolescent girls and boys perceive information and thus experience reality (Haakin, 1988).

Corresponding with the onset of formal operations (Piaget, 1962), play during adolescence is converted to internal processes and translated into internal speech, logical memory and abstract thought associated with positive affect or pleasure (i.e., fantasies, daydreams). Vygotsky (1966) interprets the decline in symbolic play between the ages of 7 and 11 as imaginative childhood play styles being replaced by cognitive styles in adolescence. Vygotsky posits that if children's play is imagination in action, then imagination in adolescents becomes play without action. Similarly, Garvey (1977) and Lieberman (1977a) suggest that play does not disappear as children mature, but develops into an attitude that represents the ability to maintain perspective or psychological differentiation (Sigel, 1970). The attitude of playfulness

may thus survive the age of play and become a salient feature of one's self-concept (Csikszentmihalyi, 1975).

Although early adolescence is a pivotal time in the development of cognitive style (Piaget, 1962), self-concept (Blos, 1962; Rosenberg, 1979; Sullivan, 1953) and the attitude of playfulness (Csikszentmihalyi, 1975; Lieberman, 1977a; Vygotsky, 1966), research on these issues during preadolescence is sparse. Similarly, results of studies on preadolescent girls showing a relation between social popularity and field dependence (Iscoe, & Carden, 1961; Vernon, 1972) combined with recent studies showing that preadolescent girls are more likely to experience a loss of self-confidence and develop a negative self-concept than preadolescent boys, suggests that a playful attitude may be an essential component for female self-acceptance and subsequent mental health (Edwards, 1993; Gilligan, 1991; Rogers, 1993; Tavris, 1993). Furthermore, albeit all three variables are significant factors in preadolescent's psychological and emotional health and occupy crucial roles in path toward self-realization, the relationship between all three concepts at any age level remains to be examined.

The purpose of this study was to investigate the relations between field independence-dependence, self-concept and the personality trait of playfulness in preadolescents. A transactional model was used to explain the possible connection between the variables, with field-independence/dependence and self-concept occupying central roles in determining individual differences in playfulness attitudes and behaviours. This study attempted to determine if significant gender differences would

occur with respect to field independence-dependence, self-concept and playfulness. Further, this study attempted to determine if field independent preadolescents differ from field dependent preadolesents with respect to self-concept and playfulness.

Definition of Terms

For the purpose of this study, the following are defined as:

1. Self-System: The conglomeration of self-knowledge as a whole, integrating both cognitive (self-concept) and affective (self-esteem) dimensions (Oosterwegel & Oppenheimer, 1993).
2. Self-Concept: Domain-specific perceptions, beliefs and attitudes of an individual's own strengths and weaknesses (Slavin, 1991) as determined by participants' scores on the Coopersmith Self-Esteem Inventory (Form A), (Coopersmith, 1967).
3. Self-Esteem: Affective dimension of self-concept that reflects a global positive or negative feeling of self-worth based on self-evaluations (Coopersmith, 1967; Rosenberg, 1979).
4. Self-Consistency: Organization of one's ideas about the self into a coherent and consistent personal theory (Epstein, 1973) determined by intercorrelations obtained among the four components of self-concept (school, self, peer and parents).

5. Field Independence-Dependence: Information-processing habits representing the learner's typical mode of perceiving, thinking, problem-solving and remembering (Messick, 1976), determined by subjects' scores on the Group Embedded Figures Test (GEFT) (Oltman, Raskin & Witkin, 1971)

6. Field-Dependence (FD): Tendency to see patterns as a whole and have difficulty separating out specific aspects of a situation or pattern (Witkin, 1950), represented by a relatively low GEFT score.

7. Field-Independence (FI): Tendency to perceive things as distinct from their background (Witkin, 1950), represented by a relatively high GEFT score.

8. Playfulness: Personality dimension consisting of manifest joy, sense of humour and three aspects of spontaneity: physical, social and cognitive (Lieberman, 1977b), determined by teachers' rating scores on the Playfulness/NonPlayfulness Scale (Form A) (Lieberman, 1977b).

Educational Relevance

The relevance of this study to education is that it enables educators to recognize and understand the critical roles both cognition and affect play in the learning process. Through the study of both the cognitive components (field independence-dependence) and affective components (self-concept and playfulness) of

adolescent development, this study may assist educators in realizing that preadolescents face the difficult and paradoxical task of cognitive integration of the self (Erikson, 1951) and social differentiation (Bernstein, 1980; Harter, 1986). Moreover, by increasing educators' awareness of the preadolescent experience, the difficulty of self-organization and social differentiation may be eased by emphasizing the affective components of education through the implementation of a Junior/Intermediate curriculum that fosters the development of a positive sense of self by integrating a playful attitude in both the classroom activities and classroom climate (i.e., encouragement of divergent/intuitive thinking skills and spontaneity).

Furthermore, the attempt to achieve autonomy and to construct a coherent, psychosocial identity may have different consequences for both social and cognitive competence for girls and boys. By raising awareness in both teachers and parents of how gender-role stereotypes affect their beliefs and behaviours towards preadolescents, this study may encourage adults to provide a psychologically safe and supportive environment where both girls and boys will feel accepted, regardless of their gender. In addition, this study strives to provide some insight for teachers and parents into a preadolescent's perspective and thus benefit all students through the promotion of a holistic educational approach that is sensitive to both the emotional and cogntive needs of the preadolescent. Ultimately, this study may assist educators to refine methods of teaching and guiding which aim to develop self-awareness among preadolescents by encouraging students to recognize and accept their strengths and differences which will enable them to cope with the upcoming diffuculties and barriers of the twenty-first century.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Despite the fact that early adolescence (11-13 years) is a pivotal time in the development of cognitive style, self-concept and playfulness, the relationships among these three variables remains to be thoroughly explored. Moreover, the influence of socio-cultural factors on preadolescent social-cognitive development, especially stereotypic social-role expectations, suggests that the ability to perceptionally differentiate or keep things separate in experience, may have different implications for social and cognitive competence among girls and boys.

The purpose of the following chapter is to illustrate the connections between field independence-dependence, self-concept and playfulness by outlining relevant research studies and theories that attempt to investigate these concepts in preadolescence. The absence of conclusive evidence and contradictory findings presented in this literature review warrants the need for further research on field independence-dependence, self-concept and playfulness among preadolescents, particularly with regards to gender differences and the influence of stereotypic gender-role expectations. Accordingly, the review of past literature will be followed by an overview of the present study including the main goals and hypotheses.

The Development of the Self-Concept

The formation of self-knowledge or self-awareness is a central and significant issue in the fields of education and psychology. Self-awareness enables one to

organize personal experiences into a cognitive construct which imparts personal meaning to all life, experiences, interpersonal relationships and individual growth and development (Sarbin, 1962). This dynamic cognitive organizer or internal working model (Bowlby, 1958) is continuously interpreting and evaluating self-relevant information and consequently mediates and regulates behaviour and affect (Markus & Wurf, 1987). Furthermore, this structural organization of self-knowledge or self-system (Higgins, 1990; Oosterwegel & Oppenheimer, 1993) provides the conceptual basis for an individual's status or personal identity within the social network (Damon & Hart, 1988).

The self-system establishes the cognitive grounds for an individual to develop attitudes and beliefs about various aspects of the self (Oosterwegel & Oppenheimer, 1993). These self-perceptions or concepts, in turn, provide the basis for one's feelings of self-regard or evaluations (Damon & Hart, 1988). Such self-feelings (also defined as self-esteem) (Rosenberg, 1989) in children and adolescents are implicated in social relations, school performances and mental health (Coopersmith, 1967; Rosenberg, 1979). Consequently, the majority of self-concept research in children and adolescents is based on the quantitative measurement of self-esteem (e.g., Coopersmith, 1967; Harter, 1986; Rosenberg, 1989).

The developing self-concept is assumed to evolve by means of reciprocal interaction in which both the person and the environment change as a result of their interaction (Lerner & Tubman, 1989). Many theorists agree that the relationship between the infant and primary caregiver plays a central role in the healthy

development of an infant's self-awareness (Bowlby, 1958; Mahler, 1963; Mead, 1956, Slade, 1987; Smilansky, 1968; Sullivan, 1953). Erikson (1968) believes that a positive infant-caregiver relationship will create a basic affective experience in which trust develops and will thus provide the foundation for future social interactions and a positive sense of self.

The development of self-awareness can be described as a process of separation and individuation (Mahler, Pine & Bergman, 1975; Sigel, 1970). This gradual psychological differentiation between the self and others begins at birth, with initial visual self-recognition occurring as early as 9 months (Lewis & Brooks-Gunn, 1979). Other investigators have found that conscious signs of self-recognition, such as embarrassed behaviour (blushing) and self-admiring behaviour (preening) do not begin until the second year of life (Amsterdam, 1972; Kagan, 1987). Such findings support Mahler et al.'s (1975) claim that by the second year of life, in accordance with the emergence of autonomy (Erikson, 1951) and symbolic thought (Piaget, 1963), the child is able to develop and maintain stable images of self and other. Furthermore, this sense of distinctness allows the child to make realistic self-evaluations (Blanck & Blanck, 1979) upon which self-conception are based. These initial self-representations serve as the foundation for the development of individuality (Damon & Hart, 1988).

The construction of self-awareness also contributes to a sense of competence or perceived ability to succeed at a particular task (Marshall, 1989). Coopersmith (1967) and White (1959) believe that feelings of competence result from the ability to act effectively and master one's environment. Consequently, as children develop a

positive sense of self and self-competence, they acquire a sense of personal control (Harter, 1986) and the ability to perceive themselves as causal agents in their environment (Bruner, 1990). According to Coopersmith (1967) these feelings of competence and personal power are prerequisites for the development of positive self-evaluations.

Perceptions of self-experiences are first described in terms of physical characteristics (including gender), followed by activities and preferences, psychological characteristics and finally subjective and private characteristics (Gellert, 1975; McGuire & Padawer-Singer, 1976; Rosenberg, 1979). As children develop, their self-systems become increasingly complex as they integrate and organize novel information (Oosterwegel & Oppenheimer, 1993). Werner's (1957) claim of real and possible selves emerging from one global, undifferentiated sense of self has been supported by recent research illustrating the compartmentalization of newly acquired knowledge into specific domains (Higgins, 1990; Markus & Nurius, 1986, Marsh, Byrne & Shavelson, 1988; Oosterwegel & Oppenheimer, 1993).

The differentiation of the self-structure into multiple domains occurs around the age of 6-7 years (Kwiatowska, 1990; McGuire & McGuire, 1988) corresponding with the transition from pre-operational to concrete operations (Piaget, 1962). According to Piaget, the cognitive ability of classification enables the child to organize the self-system into separate components. Coopersmith (1967) argues that children categorize their self-descriptions according to school or academic achievement, family (mostly parents), peers and personal interests in social activities.

This multifaceted aspect of the self has been further elaborated on by contemporary researchers including Marsh (1989) and Byrne (1984) who divided the self-system into two areas (academic and non-academic). Marsh and Byrne's research on the cognitive dimension of the self has revealed that a child's academic self-concept further differentiates into math and verbal areas (Marsh, 1984).

Occurring simultaneously with the development of self-awareness, the acquisition of social roles takes place within the context of the family structure (Orbach, 1986). Maccoby (1988) suggests that belief systems such as the self-concept accrue to gender in the form of stereotypes (cognitive categories used for the organization of social information) and culturally coded expectations, thus providing a framework for subsequent cognitions and behaviours. Moreover, Tavris (1992) believes that this social category based on gender or gender-role stereotype either perpetuates or reduces gender differences in how females and males perceive, interpret and respond to life experiences.

Although gender-typed behaviours such as gender-typed toy preferences begin around the age of 14 months (Smith & Daglish, 1977), Kuhn, Nash and Brucken (1978) found that the internalization of gender-role stereotypes does not develop until the age of 2 1/2 - 3 years, as demonstrated by children attributing gender-typed activities to female and male dolls (e.g., girl doll would cook, sew, talk a lot, never hit; boy doll would play with cars, climb trees, build things and help their fathers). Similarly, Haugh, Hoffman and Cowan (1980) found that by the age of 3, preschool children had internalized negative gender-role stereotypes for females by labelling

male infants more intelligent than females on a film. Additional studies illustrate that gender-role stereotypes are reinforced throughout preschool and elementary school by parents (Fagot, 1978), teachers (Hutton, Gouglon, Mahon, & Robertson, 1994), peers (Roopnarine, 1984) and the media (Frueh & McGhee, 1975; Pollis & Doyle, 1972; Rothschild, 1979; Wilgosh, 1994), thus remaining an integral part of self-development throughout childhood and adolescence.

Due to the critical influence of gender-role expectations on the development of the self-concept, personal and social categorical aspects of identity form simultaneously and thus the differentiation of gender and self become integrated (Abrams, 1989; Unger & Crawford, 1992). McGuire and McGuire (1982) and Coleman (1974) suggest that social roles may influence female and male identities to emerge in different ways. Social role expectations that define femininity through passivity, nurturance and dependency, while defining masculinity through autonomy, assertiveness and risk-taking reinforce such behaviours in the appropriate gender and thus may create self-fulfilling prophesies (Brophy & Good, 1970; Rosenthal & Jacobson, 1968). For instance, gender-role expectations and stereotypes act in ways that confirm the beliefs teachers and parents have about children which, in turn, produces the behaviours they expect from others by generating subtle interactional cues, in other words, social interactions enable social cognitions to become social reality (Tavris, 1992; Unger & Crawford, 1992). Consequently, as members of both genders increasingly perceive themselves in terms of broad social categories by adhering to cultural gender-role stereotypes, girls may thus learn to become more

people oriented and concerned with physical appearance while males may learn to become more autonomous and concerned with success and achievement (Edwards, 1993; Hendry, 1983; Katz, 1979; Sanford & Donovan, 1985).

Self-Concept in Early Adolescence

Most researchers agree that the onset of adolescence is a time for re-organization and differentiation of the self-system (e.g., Blos, 1962; Coopersmith, 1959; Erikson, 1951; Harter, 1986). According to Piaget (1962), early adolescence (11-13 years) coincides with the emergence of formal or abstract thought, while Erikson (1951) views this period as a pivotal time in identity formation. As young adolescents' thoughts become reflective, they are able to consciously monitor their own existence (Peever & Secord, 1973) and thus experience an increased sense of self and personal agency (Broughton, 1980; Rosenberg, 1993, Selman, 1980). Moreover, recent research supports the notion of the self-system's move from one global construct during childhood to a more differentiated structure in adolescence (Harter, 1986; Marsh, 1989; Oostengel & Oppenheimer, 1993).

Self-concept differentiation during adolescence has been supported by various studies that have found a decrease in correlations between various self-concepts within the self-system (Brownfain, 1952; Campbell, 1990; Lipsitt, 1958; Offer & Howard, 1972). Additional evidence on self-development in adolescence has indicated that the decline in self-concept consistency and self-esteem during early adolescence is followed by a re-integration of the self and an increase in self-esteem during late adolescence (16-18 years) (Harter, 1986; Oosterwegel & Oppenheimer, 1993,

Strachan & Jones, 1982). Harter suggests that these self-concept discrepancies may be based on underlying cognitive processes, and the young adolescent's ability to cope or deal with these inconsistencies may determine the degree to which the self re-integrates later on (Oosterwegel & Oppenheimer, 1993). This research supports Erikson's (1951) contention that the inability to integrate one's self-system during early adulthood may lead to emotional contradictions and subsequent maladjustment.

In addition to self-integration, the young adolescent plays an active role in the maintenance or regulation of the self-concept (Markus & Nurius, 1984; Ruble & Flett, 1988; Smith & Smoll, 1990). Research has shown that young adolescents react to self-relevant information in a way comparable to adults as opposed to younger children. Past studies on school-age children reveal that children with low self-esteem prefer self-enhancing information over self-consistent information (Smith & Smoll, 1990), while adults have been found to prefer information that is consistent with their self-concept, even if it is negative (Swann, 1987). Similarly, Harter (1986) demonstrated a preference for self-consistent information among sixth graders by finding that children with high self-esteem rated their competencies higher than did their teachers, while children with low self-esteem rated themselves lower. These results show evidence for young adolescents to self-regulate analogous to adults rather than children, relying more on cognitive motivations as opposed to affective motivations (Feldman & Ruble, 1988; Swann, Hixon, Stein-Seroussi, & Gilbert, 1990).

The multidimensionality of the self-system has also led to the theory of its

being hierarchically arranged (Markus & Wurf, 1987; Marsh, Byrne, & Shavelson, (1988); Shavelson, Hubner, & Stanton, 1976). Harter (1986) posits that this hierarchy reflects the importance or personal relevance of each self-concept which may vary for different individuals, families and cultures. For example, a low self-evaluation in one domain (i.e., academic) may not have an overall negative effect on the self-system if that particular domain is not valued by the individual. In contrast, if a child highly values his or her academic achievement, a negative evaluation in this domain may have a deleterious effect on the entire self-system and subsequent emotional health (Coopersmith, 1967; Markus & Wurf, 1987).

Despite the implications for personal functioning, research on personal relevance of self-descriptions is relatively recent with existing studies having demonstrated that gender and social behaviour become increasingly significant to identity formation during preadolescence. Abrams (1989) suggest that this focus on gender and social identity beginning around the age of 11 occurs in response to the combination of parental and teacher reinforcement of sex-role differentiation (Fagot, 1979; Parsons, Kaczala & Meese, 1982, television (Durkin, 1985; Tan, 1985) and peers (e.g., Broderick, 1966; Rosenberg, 1989). The majority of the literature reports gender differences in specific self-concepts that are consistent with sex-stereotypes. For example, boys possess higher self-concepts in masculinity, achievement, leadership and physical ability than girls, but lower self-concepts in congeniality and sociability (Dusek & Flaherty, 1981; Harter, 1982; Piers, 1984).

Social experience also continues to play a significant role in self-conception

during young adolescence, especially in the school milieu (Coopersmith, 1967, Purkey, 1970), with the majority of adolescent development models agreeing that between the ages of 10 and 18, identification shifts from a primarily parental focus to one that includes peers (Abrams, 1989; Broderick, 1966; Coleman, 1980; Coopersmith, 1959; Erikson, 1968). Furthermore, Hughes (1991) and Stephenson (1984) suggest that the development of both personal and social categorical aspects of identity occur simultaneously with the shift of focus from physical attributes to social behaviour in preadolescent self-formation. While the parent-child relationship still remains a key component in the preadolescent's self-concept (Rosenberg, 1989), additional relationships including peers and teachers begin to gain significance.

According to both Sullivan (1953) and Erikson (1968), the development of intimate peer relations and the self are related with Sullivan claiming that the development of positive peer relationships in early adolescence is imperative for future success in interpersonal relations and a positive self-concept. Alternatively, Erikson believes that a positive self-identity is the prerequisite for subsequent successful peer relations. Such theories are supported by Pekrun (1990) who found that the influence of family, peers and teachers had a cumulative effect on 10-13 year-olds' general and academic self-concept, with teacher support correlating the highest. Moreover, the instrumental role of the school environment in the development of a positive self-concept in adolescence is further illustrated by Cowen, Pederson, Babigian, Izzo and Trost's (1973) longitudinal study which found that school adjustment during adolescence significantly predicted psychological well-being in

adulthood.

The school environment (i.e., classroom atmosphere, curriculum, peer relations, teacher-peer relations) forms the socio-cultural context in which the perpetuation of gender-role stereotypes exist (Edwards, 1993; Hutton et al., 1994; Van Blerkom, 1988). Social interactions among peers create a major milieu in which the development of gender-typing occurs, assisting in the formation of a social identity which has the potential to become an organizer of social functioning (Maccoby, 1988). Although research is limited on the relationship between gender identity and peer interactions, studies have shown that girls exhibit more traditional feminine behaviours (i.e., submissiveness, dependence) in cross-gender groups than same-sex-groups (Maccoby, 1988; Charlesworth & Dzur, 1987).

Similarly, Skrypnek and Snyder (1982) found that university male students were more likely to choose more masculine tasks when they believed their partner was a woman than when they believed she was a man or had no information about her sex. Such findings indicate that it was the gender of the peer group to which the students believed they were assigned rather than their actual gender that influenced behaviour. Thus, research on peer influence on gender-appropriate behaviour (Charlesworth & Dzur, 1987; Maccoby, 1988; Skrypnek and Snyder, 1982) illustrate how one person's beliefs about the gender and corresponding stereotypes of another change the interaction so as to confirm the stereotypical beliefs. Moreover, such research results reinforce the view that self-fulfilling prophesies contribute to the perpetuation of stereotypic beliefs about women (Unger & Crawford, 1992).

While in the early elementary grades, classroom success is congruent with a positive self-image in girls due to the traditional feminine ideal involving conformity, obedience and conscientiousness (Loeb & Jay, 1987); this gender pattern changes during preadolescence where traditional masculine behaviours such as ambitiousness, autonomy and determination become valued and equated with competence (Abrams, 1989; Tavris, 1992). The perpetuation of sex-role stereotyped behaviours by ascribing socially valued attributes such as ambitiousness and determination to males while encouraging females to adopt less valued feminine characteristics including compliance and deference becomes intensified during preadolescence (Carter & McCloskey, 1984; Newson & Newson, 1987). Correspondingly, differentiation due to sex-role expectations is supported by research on gender differences during the pre-teen years which has found significant differences between male and female students in such areas as academic achievement (Fitzpatrick, 1978; Reis, 1987; Shaw & McCuen, 1960), spatial-visual skills (Edwards, 1993; Saegert & Hart, 1977) and self-concept (Lynn, 1969; McGuire & McGuire, 1982).

In accordance with gender-role intensification, research has indicated a higher incidence of gender stereotyping to exist among preadolescent boys than girls (Carter & McCloskey, 1984; Martin, 1989). McGuire (1988) suggests that this greater rigidity of appropriate male gender-roles supports the stereotypic belief that traditionally masculine attributes are more highly valued in society than traditional feminine attributes. Consequently, as they increase in age, boys have been found to exhibit more gender-typed behaviours (Smetana & Letourneau, 1984) and attitudes

(Bardwell, Cochran, & Walker, 1986) than girls. Kate and Boswell (1986) suggest that this exaggeration of gender stereotyped behaviour is a result of gender socialization which allows more latitude in girls' attire, toy preference and behaviours and thus enables them to become more flexible in their gender-role attitudes and behaviours.

Additionally, Fennema (1980) and Tavris (1992) suggest that inter-group comparisons based on the stereotypic characteristics of men and women in general, as opposed to individual classroom performances of boys and girls, may contribute positively to self-image among preadolescent boys by allowing them to favourably compare themselves to girls. In contrast, Blackstone (1976) found that preadolescent girls were decreasingly likely to make competitive comparisons with boys in traditionally masculine-valued areas, perhaps to protect themselves from the potentially negative effects such comparisons could have on their self-concept (Wagner, Ford, & Ford, 1986). Further support for gender-role intensification stems from Simmons and Blyth's (1987) findings which illustrated that from Grades 6 through 9, not acting like members of the opposite gender was the most important factor in self-definition.

In addition to the influence of peers in gender-role intensification, research has shown that both parents and teachers play a significant part in the internalization of gender-role stereotypes during preadolescence. Gender differentiated beliefs and expectations communicated by both teachers (Abrams, 1989; Carter & McCloskey, 1984; Newson & Newson, 1987) and parents (Feinman, 1981; Fivush, 1989) may

reinforce the distinction between the two genders by means of self-fulfilling prophesies. Teacher expectancy research (Brophy & Good, 1970; Jones & Gerig, 1994; Rosenthal & Jacobson, 1969) has shown that teachers' beliefs/expectations regarding students may have a direct influence on student self-perceptions and subsequent student behaviour which confirms the teachers' initial expectation. For example, differential treatment by parents and teachers consistent with stereotypic beliefs that produce independence and efficacy in boys and emotional sensitivity, nurturance and helplessness in girls, may lead to the internalization of these beliefs which, in turn, will lead to stereotypic gender-role behaviours.

The emphasis of the traditional male sex-role stereotype in both preadolescent education and self-redefinition (e.g., assertiveness, self-reliance, individualism) enables some preadolescent boys to develop a relatively more positive attitude toward their self-image than girls (Lynn, 1969; McGuire, 1982), particularly in the academic domain (Abrams, Sparkes, & Hogg, 1985; Eccles, 1985). Academic achievement has been found to have a critical influence on the young adolescent's self-concept (e.g., Caplin, 1969; Purkey, 1970), with the majority of recent research indicating that academic achievement is more highly correlated with academic self-concept than with non-academic and general self-concepts (e.g., Byrne & Shavelson, 1986; Marsh, 1984; Shavelson & Bolus, 1982). Marsh, Parker and Barnes (1985) found that the academic self-concept consists of at least two domains (math and verbal) which appear to be independent of other self-domains. However, such studies can only suggest that a significant relation exists between cognitive learning and self-concept which differs

from a causal relation (i.e., positive self-concept causes high academic achievement or vice versa).

Research on gender differences in academic achievement and self-concept has shown that up until the age of 11, girls are more academically successful than boys, but later on, lag behind in educational attainment (Anyon, 1983, Mahoney, 1985; Sutherland, 1981). Despite the lack of objective differences in academic domains, the onset of puberty coincides with a differentiation in choice of academic subjects with females focusing on arts and males on sciences and maths (Abrams et al., 1985; Eccles, 1985). Furthermore, Marsh, Byrne and Shavelson (1988) reported that boys possessed higher math and general self-concepts while girls had higher academic and verbal self-concepts. Related findings regarding adolescent girls' self-concepts illustrate that beginning at preadolescence, the establishment of interpersonal relationships with boys becomes the most important criterion for a girl's sense of self (Schofield, 1981; Tavris, 1992), resulting in an increased awareness of physical appearance and body image (Chernin, 1985; Orbach, 1986) and exhibition of traditionally feminine behaviour (Newson & Newson, 1987). Thus, the emphasis on physical attractiveness and desirability (CTF, 1991; Hendry, 1983; Katz, 1979) combined with an awareness that most males eventually will attain higher status than most females (Blackstone, 1976) may lead to an increasing dissatisfaction with traditionally defined gender identity, resulting in a negative sense of self (Chernin, 1986; Gilligan, 1991; Tavris, 1992; Wagner, Ford, & Ford, 1986).

Field Independence-Dependence and Self-Concept

The influence of the self-system on social behaviour cannot be examined unless the underlying cognitions are first analyzed (Damon & Hart, 1988; Marshall, 1989). Many theorists agree that various cognitive processes are used in construing the nature of the self (e.g., Piaget, 1962; Sigel, 1970; White, 1971; Witkin, 1950). The restructuring of the self-system during early adolescence requires specific cognitive skills, particularly the ability to differentiate, organize and integrate. Oosterwegel and Oppenheimer (1993) believe that as soon as a required cognitive skill is present, social processes take over and subsequent self-system organizations are explained by one's perceptions of their social experiences.

White (1971) asserts that individuals selectively filter or process information, which, in turn, influences their perception of experience and their ability to learn (Slavin, 1991). These cognitive styles refer to the typical ways an individual interprets reality and derives meaning from it (Woodward & Kalyan-Masih, 1990). Similar to personality traits, these characteristic modes of operation tend to function across a variety of intellectual and perceptual activities (Martin, 1991) and are relatively stable throughout life (Witkin & Goodenough, 1977). Although experimental research has discovered more than 20 dimensions of cognitive styles (Messick, 1976), field independence-dependence has received the greatest research attention (Witkin & Goodenough, 1981).

Witkin (1950) defines field independence-dependence as the ability to separate an element from an embedding context (Witkin, Moore, Goodenough, & Cox, 1962).

Viewed as a continuum, the contrasting modes of the individual's performance on restructuring cognitive tasks are characterized on the two ends. One end of the continuum represents the field-independent (Fl) person who perceives in an articulated manner, analyzing and structuring her/his experience , and easily separating elements from an embedding context. In contrast, the other end of the continuum represents the field-dependent (FD) person who perceives in a relatively global fashion and has difficulty separating an element from its field or restructuring information from the environment in a problem-solving situation (Van Blerkom, 1988).

According to Witkin and Goodenough (1977, 1981), the field independent-dependent cognitive style is directly related to psychological self-other differentiation or identity formation (Erikson, 1968; Mahler, 1963). Similar to Sigel's (1970) distancing theory, Witkin et al. (19620 suggest that a child must first separate psychologically from the ongoing present in order to develop cognitive representations which leads to understanding of self and others. Both Sigel and Witkin (1950) claim that one's perception of the world is related to one's perception of his/herself, and enables an individual to distinguish between what is self and what is external to self. This attainment of self-awareness helps to develop a personal frame of reference which serves as a guide for self-definition and relation to the world (Schenkel, 1975).

Witkin and Goodenough (1981) claim that these self-definition guides differ according to field independence-dependence. Witkin and Goodenough (1977) found that FI individuals possess an internalized frame of reference, and tend to rely more on their inner resources as their primary referent for behaviour, while alternatively,

FD individuals adhere to a more externally based self-definition, relying more on external resources. Similarly, research on body or physical self-concept, that is the impression an individual has of her or his own body, and cognitive style, has repeatedly shown measures on a scale of articulation of body concept (figure drawings) relate significantly to measures of field dependence (Corah, 1965; Karp, Silberman, & Winters, 1969; Winestine, 1969).

For example, Witkin (1965) found that figure drawings made by FD subjects tended to be global in character, exhibiting very little detail, unrealistic representation and proportioning of body parts and gender roles. In contrast, figure drawings made by relatively FI children were realistically proportioned with clear representations of gender and body parts. These findings support Witkin's (1950) contention that FI individuals are more likely to experience a separate sense of identity and rely to a greater degree on the self as a basis for perception than FD individuals.

More recently, Chang (1984) provides direct evidence for Witkin's (1950) differentiation theory in an experimental study of self-concept and cognitive style in 94 five and six-year-olds. Chang found that children's EFT scores were positively related to their Body Barrier scores (awareness of physical body image), indicating that FI children experienced a greater sense of separate identity than FD children. Furthermore, 26 subjects who obtained a low Body Barrier Score received positive self-esteem training which was found to significantly enhance the children's sense of separate identity but did not affect cognitive style. Chang concluded that although self-concept and cognitive style were not found to be causally related, socialization

experiences that enhance self-recognition and self-acceptance may promote a sense of separate identity (i.e., autonomous functioning) in children.

Research has supported the relationship between field independence and the ability to function autonomously or remain distinctly separate from external social references (Goldstein & Blackman, 1978). Studies comparing children's scores on the Embedded Figures Test (EFT) (Witkin, 1950) with Mahler's model of separation-individuation (Mahler et al., 1975) found that FI preschoolers experienced less difficulty in separations from caregivers than FD preschoolers (Baraga, 1977; Paul, 1975; Olesker, 1978). Similarly, additional studies have found that parental encouragement of separation and autonomy (i.e., authoritative parenting style) (Sigel & McGillicuddy-Delisi, 1984) may promote field independent characteristics in a child (Coates, 1972; Pederson & Wender, 1965; Witkin, Oltman, Raskin, & Karp, 1971).

Although there is an existing view that the cognitive task of the separation-individuation process also contains an affective dimension (Erikson, 1968; Mahler et al., 1975, Sigel, 1993; Witkin & Goodenough, 1981), research in the affective and social domains of field independence-dependence remains sparse. The majority of studies on the restructuring ability in the social domain have found in general, that FD individuals possess a more interpersonal orientation (i.e., favour close contact and situations over solitary situations), more positive descriptions of self and others, greater preference for people-oriented/humanistic vocations, greater self-disclosure, co-operativeness and learn social material more easily than FI individuals (Linton,

1955; Oltman, Goodenough, Witkin, Freedman, & Friedman, 1975; Pederson & Waldrop, 1967; Schleifer & Douglas, 1973; Sousa-Poza, Rohrberg, & Shulman, 1973).

Further research has shown an impersonal orientation reflected by FI individuals preferring solitary situations over social ones, paying less attention to social cues and preferring vocations that require high autonomous functioning and analytic thinking (Eagle, Goldgerger, & Breitman, 1969; Witkin & Goodenough, 1981; Witkin, Moore, Goodenough, & Cox, 1977). Due to evidence of limited interpersonal competencies in FI individuals, Witkin and Goodenough (1981) suggest the need for future research to focus on social skills in such individuals.

Field Independence-Dependence and Self-Concept in Early Adolescence

Although early adolescence is a time of increased awareness of one's separateness and cognitive self-restructuring (Blos, 1967; Erikson, 1968), few studies exist on the relation between field independence-dependence and self-concept during this period. Indirect evidence from studies on the cognitive component of self-esteem in adolescents have found that an unstable or inconsistent self-system is correlated with feelings of low self-esteem and self-consciousness (Breckler & Greenwald, 1982; Campbell, 1990; Offer & Howard, 1972). Similar to Rosenberg's (1989) claim that extreme self-consciousness has implications for self-esteem, these authors propose that heightened introspection or self-awareness may lead to increased self-criticism and self-absorption and thus impede the development of a positive self-concept (Brennan, 1985).

Additional findings on the relations between identity formation and cognitive style in adolescents provide further evidence for an extreme field independent or analytical cognitive style to be linked to subsequent psychological functioning (Welsh, 1977). For example, Witkin and Goodenough, 1977 found that extremely FI adolescents experienced a lack of self-consistency and subsequent low self-esteem based on their tendencies to self-reflect, analyze and appear socially introverted. Furthermore, in agreement with other studies (Elliott, 1984; Heiss, 1981), Rosenberg's (1989) research on interpersonal attitudes and behaviour in adolescents revealed many similarities between adolescents with low self-esteem and FI individuals including heightened self-consciousness, interpersonal awkwardness, preference for solitude over social situations and a tendency toward self-absorption.

Other research on field independence-dependence and self-consistency refutes the hypothesis that FI individuals possess an inconsistent or negative sense of self, although such studies do not elaborate on the level of field independence. For example, studies on self-consistency and cognitive style revealed that FI female college students possessed a more coherent, psychosocially developed sense of identity than FD students (Bhatnagar & Rastogi, 1986; Schenkel, 1975) but whether or not the EFT scores were extreme were not discussed. Similarly, FI adolescents were found to possess a more stable or consistent psychological and physical self-concept than FD adolescents (Jain, Bhatnagar, & Rastogi, 1988).

Further evidence that the self is significantly linked with cognitive style is derived from Bhatnagar and Rastogi's (1985) study on self-concept and field

independence-dependence in university students. Although no gender differences were found, FI students had a more positive self-concept and a greater congruency between real and ideal self-concepts. In a related study on identity development and self-reflection, Shain, Farber and Barry (1989) found that female adolescents who possessed an analytical cognitive style were more likely to self-reflect and achieve identity formation than adolescents with a more broad or global cognitive style.

An additional source of self-esteem may be derived from academic achievement which has been widely studied in the area of field independence-dependence (e.g., Witkin, Moore, Goodenough, & Cox, 1977). The majority of the studies have found that FI individuals are more likely to possess a higher IQ and do well in mathematics, science and problem-solving tasks than FD individuals (e.g., Slavin, 1991; Van Blerkom, 1988; Witkin & Goodenough, 1981). In contrast, FD individuals have been found to experience learning problems (Keigh & Donlon, 1972), possess low self-esteem (Garner, 1986) and learn social information faster than non-social information (Witkin et al., 1977). Furthermore, results from Garner and Cole (1986) study of cognitive style and locus of control in 13 year-olds demonstrated that FI children obtained higher achievement scores and possessed a more internalized style of locus of control than FD children. Garner and Cole, among other researchers (Feurerstein, 1979; Letteri, 1980) contend that field independence is a variable related to analytic ability and appears pliable and adaptive.

The lack of consistent findings and absence of studies on field independence-dependence and self-concept in adolescence support the need for future research to be

conducted in these areas, especially during early adolescence (Rosenberg, 1989; Witkin & Goodenough, 1981). Moreover, such contradictory findings suggest that in order to study the correlates of the FI-FD construct, a more accurate operational definition of field independence-dependence is needed to distinguish between FI-FD scores that are extreme and ones that represent an acceptable or more adaptive level.

Social Cognition and Imaginative Play

Interpersonal or social behaviour in children has mostly been studied within the broad framework of play (Johnson, Christie, & Yawkey, 1987). The phenomenon of play is viewed as holistic and integrated within the individual personality and self identity of the player (Erikson, 1951; Peller, 1950; Sutton-Smith, 1967) and enhances all aspects of child development (Johnson et al., 1987; Wolfgang, 1977). Play is also viewed as a multifaceted and multiply determined concept that reflects the differences in children's overall personality and underlying mental structure (Slade, 1987) and takes on a significant role in establishing a child's sense of self (Edwards, 1993; Saegert & Hart, 1977). Despite numerous definitions, most researchers accept the view that play behaviour is a free, personally defined, non-goal activity or process that has a cognitive component of secrecy or consciousness of pretending and an affective component of joyfulness or pleasure (e.g., Ellis, 1973, Huizinga, 1955; Piaget, 1962). While the majority of past research has indicated that types of play are linked to social and cognitive development (e.g., Johnson et al., 1987; Hughes, 1991), the relations between play and more specific areas of development such as self-concept and cognitive style have been relatively ignored.

The premise that various behaviours in symbolic or imaginative play are determined by social-cognitive processes suggests that cognitions precede behaviour (Dodge & Feldman, 1990; Marshall, 1989). Imaginative or make-believe play refers to the ability to think representationally and express these ideas as symbols of play (Piaget, 1962). Symbolic transformations (e.g., using a box as if it were a boat) promote flexibility and creative thinking skills by increasing children's behaviourial options, enabling them to create novel mental associations (Bruner, 1972; Sutton-Smith, 1976). Vygotsky (1966) claims that these differences in children's symbolic play may reflect how they perceive or process social information in their reality, which in turn, may lead to the development of abstract thought.

While the few existing experimental studies in the area of play indicate that children's social cognitions may lead to social behaviour (Dodge, 1986; Dodge, Murphy, & Buchsbaum, 1984), the majority of the research has been based on the role of play in cognitive development. Correlational studies have revealed that sociodramatic or voluntary, social make-believe play is positively related to various cognitive variables including IQ scores (Johnson, Ershler, & Lawson, 1982) and problem solving skills (Simon & Smith, 1983; Bruner & Genova, 1976). Similarly, experimental or play-training studies have suggested that sociodramatic play may actually promote cognitive growth (Saltz, Dixon, & Johnson, 1977). These results support Piaget's (1961) and Saracho's (1989) notion that abilities to structure the physical world and to understand social perspectives are developed through children's play.

Research on cognitive development and play has also revealed differences in terms of object versus people orientation (Emmerich, 1964). In Jennings' (1975) study of problem solving abilities, preschoolers who preferred playing with objects to people performed better on cognitive tasks with physical materials than children who preferred social activities. Furthermore, children who exhibited more social knowledge were found to be more effective in social functioning or social competence than object-oriented children. Jennings' conclusions that social knowledge and object-orientation serve to reinforce cognitive skills support Witkin and Goodenough's (1977) findings that the cognitive style of field independence-dependence is reflected in nonsocial versus social orientation respectively.

Additional studies on stylistic differences in preschoolers' play behaviours have delineated two types of symbolic or imaginative play styles: object-dependent imaginative play which involves existing or actually present events, objects or persons whereas object-independent play involves imaginary objects and events in make-believe situations (Wolf & Gardner, 1979; Wolf & Grollman, 1982). Object-dependent children or patterners have been found to prefer a material mode in make-believe play by displaying skill and interest in making patterns and structures with objects and materials rather than in communication or interpersonal events (Matthews, 1977) and to excel in visual-spatial tasks and relations between objects. In contrast, object-independent children or dramatists prefer an ideational mode (Matthews, 1977) by displaying a strong skill and intersest in social interactions and sociodramatic play. Similar to Jennings (1975) notion of individual differences in problem-solving and

social orientation, Wolf and Gardner suggest that these imaginative play styles are an integral part of a child's underlying mental structure, representing variations in self-concept and the construct of field independence-dependence (Witkin, 1950) with object independence-dependence paralleling field dependence-independence.

Although children's play behaviour has been found to reflect field independence-dependence (e.g., Jennings, 1975; Wolf & Grollman, 1982), few researchers have investigated the relationship between these two variables. The preponderance of studies on cognitive styles and play behaviour in young children have examined field independence-dependence (Witkin, 1950) with the measure of a simplified version of the EFT called the Preschool Embedded Figures Test (PEFT) (Coates, 1972) which is used for children under the age of ten. The majority of the findings consistently reveal that FD children are generally more socially oriented (Coates, 1972; Coates, Lord, & Jakabovics, 1975), more interested in social information (Ruble & Nakamura, 1972) and engage in social play more often than FI children (Steele, 1981).

More specifically, gender differences (both between and within group differences) in preschool play behaviour related to FI/FD have been investigated. In relation to intra-group differences, Coates (1972) found that FD girls were more socially oriented and preferred more traditionally feminine toys (e.g., dolls) than FI girls who preferred to play alone with more traditionally masculine toys (e.g., blocks). Furthermore, Coates, Lord and Jackabovics (1975) found significant correlations to exist between the construct of FI/FD and play preferences among girls

whereas the corresponding correlations for the boys were found to indicate an opposite direction and to be of a less magnitude. FD girls were found to prefer playing with others with dolls (FI - Playful Behaviour, $\underline{r}$ = -.52), compared to FI girls who preferred playing alone with blocks (FI - Playful Behaviour, $\underline{r}$ = .42). In contrast, playful behaviour and the construct of field independence did not appear to be related for the boys ($\underline{r}$ = .01). Based on these results, Coates et al., concluded that the relationship between FI/FD and play is stronger for girls that it is for boys and thus supported Witkin's and Goodenough's contention that FD individuals are more socially oriented than FI individuals (although only among females).

Most recently, Saracho (1985, 1986a, 1986b) investigated the relationship between sociability and cognitive style in preschoolers. Saracho (1986b) has consistently found that FD children participate in social play while FI children prefer to play alone. Saracho (1985) suggests that a field dependent cognitive style allows children to develop social skills and a sensitivity to the needs of others, which in turn, enables them to participate in the more social forms of play such as co-operative, parallel, and associative (Parten, 1932). In contrast, FI children who are socially distant but have analytic skills and appear very autonomous may be perceived as cold and distant by other children and thus choose to participate in less social, solitary play.

Furthermore, in a similar study, Saracho (1989) indicated that play behaviours in FD preschoolers consisted of social relations and activities with concrete objects while play behaviours in FI preschoolers consisted of role-playing ideas and block

building activities. The findings of Saracho (1985, 1986a, 1986b, 1989) and others (e.g., Coates, 1972) therefore support the social dimension of Witkin and Goodenough's (1977) cognitive style theory by replicating the findings of FI/FD individuals possessing an interpersonal and impersonal orientation respectively. However, once gender is considered as an independent variable, differences between girls and boys suggest that the relationship between FI/FD and play for boys becomes unclear and warrants the need for further research.

Field Independence-Dependence and Playfulness

The decrease in observable play behaviours as children develop cognitively and thought becomes more reflective (Piaget, 1962) may provide an explanation for the lack of research on cognitive style and social behaviour in young adolescents. Young adolescents are more likely to internalize their playful behaviour in terms of an attitude or personality trait referred to as playfulness (Garvey, 1977; Lieberman, 1977b; Vygotsky, 1966). While the term playfulness has been defined in many ways, such as an attitude of the mind (Dewey, 1933) or the play "spirit" resulting in joy or fun (Lieberman, 1977b), researchers agree that playfulness is the affective component of play (Garvey, 1977; Lieberman, 1977b) and plays a key role in psychological well-being throughout one's lifetime (Huizinga, 1950; Truhon, 1983).

Playfulness theorists argue that spontaneous playfulness in children is critical for later adjustment and creative expression (e.g., Sutton-Smith, 1967; Truhon, 1983). Lieberman (1977b) defines playfulness in terms of five traits: manifest joy (laughter, expression of joy), sense of humour (appreciation of comical events),

spontaneity or an intrinsic motivation to change the direction of ongoing involvement whether it be physical (co-ordinated movement of whole or parts of the body), cognitive (imagination, creativity) or social (ability to get along with others). The development of two similar playfulness scales enabled Lieberman (1977a) to study playfulness in kindergarten children and adolescents in Grades 9 through 12. Lieberman found the playfulness traits highly correlated with observed play behaviour. From this research, Lieberman concluded that playfulness is a single personality dimension or unitary construct and is the key to optimal functioning by representing the ability to maintain perspective or to psychologically differentiate (Sigel, 1970).

Lieberman (1977a) reported a positive relationship between playfulness and divergent thinking or creativity in 5 year-olds, but results were less conclusive for the adolescents. Additional support for the relationship between playfulness and cognition derives from a series of experimental studies that found a causal link between play and creativity (Dansky & Silverman, 1973, 1975). Dansky and Silverman found that children who participated in free play with objects were later able to find more creative, nonstandard uses for them as compared to the non-playing children. Based on these results, Dansky and Silverman suggest that playful activity may provide an opportunity for children to organize their experiences and exercise their cognitive abilities in a manner that is likely to encourage divergent or imaginative thinking in future situations. Furthermore, a series of play-training studies has provided evidence that play promotes creative thinking (Dansky, 1980).

In contrast, Truhon's (1983) study indicated that playfulness contains both affective and cognitive components and was not related to creativity. Truhon proposed that these two aspects of playfulness may have occurred simultaneously, thus accounting for Lieberman's (1977b) finding of a unidimensional construct. Although this possibility was alluded to in Lieberman's study of adolescents, the results suggested that the two-dimensional construct represented non-playfulness behaviour as opposed to playfulness behaviour.

The plausible link between cognitive development and playfulness may also be affected by socio-cultural factors such as the influence of parents and teachers (Edwards, 1993; Unger & Crawford, 1992). Lieberman (1977a) suggests that teachers' gender-typing behaviour may result in constriction of playfulness as a function of expected dependency behaviour in girls and a reinforcement of playfulness as a function of expected assertiveness in boys. Thus, through their stereotypic beliefs that playfulness is masculine, teachers may be conveying differential play expectations for girls and boys (i.e., girls are expected to be less playful than boys). Studies supporting Lieberman's theory (1977a) have suggested that parents and teachers restrict girls' movement and place a higher value on verbal skills than motor skills as opposed to boys (Bandura, 1977; Fagot, 1978).

Additional research has found physical playful activity may assist in the development of spatial visual skills (Saegert & Hart, 1977) which are necessary for academic success in the areas of math and sciences, suggests that such restrictions on girls' freedom to explore and master environments may have deleterious effects on

subsequent self-concept (Bryant, 1985; Feiring & Lewis, 1987). Further studies in cognitive development support this theory by finding that gender differences in spatial-visual skills commence around the age of 8 corresponding with the increase in limitations on physical freedom and playful activities (i.e., sports) among preadolescent females (Abrams, 1989; Saegert & Hart, 1977; Witkin et al., 1971). Moreover, Tavris (1992) suggests that due to the instrumental role socio-cultural factors play in child development, such gender differences must be considered within the socio-context in which they occur. Thus, gender differences may simply reflect the fact that gender is correlated with particular experiences (Hyde, 1981; Tavris, 1992; Unger & Crawford, 1992).

The attitude of playfulness plays a significant role in the process of self-concept formation by enabling one to expand the sense of self as an autonomous and functioning person who is in control of surrounding events (Csikszentmilalyi, 1979; Garvey, 1977). The relationship between play and the development of self-knowledge is evidenced in the simultaneous emergence of self-consciousness (Amsterdam, 1972; Kagan, 1982) and symbolic play (Piaget, 1968) during the second year of life. In agreement with attachment theory (Bowlby, 1969, Slade, 1987), the process of self-identification may reflect children's social cognitions and their understanding of self and others (Damon & Hart, 1988; Dodge & Feldman, 1990; Johnson, Christie, & Yawkey, 1987).

Furthermore, playfulness is the ability to learn to be safely in control in an activity frame without worrying about being out of control (Miller, 1973). The

concept of self-control is intimately related to the development of both playfulness and self-identification (Smilansky, 1968; Sutton-Smith, 1980)) by allowing children to lose their inhibitions (Wolfgang, 1977) and helping them to realize that they are agents of cause in control of body, behaviour and emotion (Bruner, 1990). For example, children need to develop a sense of personal security and control over their environment before successfully engaging in playful activities that often involve elements of risk-taking (Bruner, 1990; Wolfgang, 1977). Garvey (1977) and Truhon (1983) also believe that playfulness includes a self-control component by suggesting that internal control and intrinsic motivation are two critical qualities. Playfulness can also foster a sense of control and autonomy in the child, providing an opportunity for the child to develop a sense of personal mastery and self-empowerment (Elkind, 1981; Sutton-Smith, 1967; Wolfgang, 1977).

The existence of a component of self-control in playfulness is supported by Singer's (1961) study of imagination and waiting ability in children aged 6 to 9 years. Results demonstrated that imagination or fantasy play behaviours were positively associated with waiting ability or self-control. Similarly, Smilansky (1968) and Wolfgang (1977) suggest that sociodramatic play allows children to cognitively structure their world and provides an avenue for emotional release and integration. Results from both Smilansky's study of disadvantaged (low socio-economic status (SES) family background) and Wolfgang's study of privileged children (High SES family background) indicated that children who abstained from sociodramatic play were less developed verbally, socially and cognitively, and exhibited more impulsive

behaviour than children who participated in sociodramatic play.

In support of Erikson (1951), Wolfgang (1977) claims that impulse or self-control development is impeded in non-playing children, resulting in an inability to trust and relate to others. Wolfgang divided non-players into passive and aggressive children with passive children lacking a sense of individuated awareness and appearing inhibited and socially withdrawn in comparison to aggressive children who displayed tension and anxiety through acts of impulsivity and heightened motor activity. In a related finding, Smilansky (1968) found that low SES children played less than middle or high SES children, suggesting that a negative self-concept may hinder play behaviour. Both Wolfgang and Smilansky conclude that the absence of play behaviour may be indicative of deviance from age-appropriate social and emotional norms.

Playfulness can also be viewed as a socially desired personality trait that may partly determine a child's social acceptance (Parker & Asher, 1987). Asher and Williams (1987) posit that a child's decision regarding whether or not to play with another child is based on six questions concerned with the characteristics of the child. In particular, the question: "Is the child fun to be with?" suggests that the inability to behave humorously or spontaneously, thus lacking a playful attitude, may be an antecedent to peer rejection (Coie, 1990). Similar to passive non-players (Wolfgang, 1977) and submissive-rejected children (Rubin et al., 1990), Coie speculates that children who are too serious, over-controlled and analytical may fail to generate sufficient emotional excitement to maintain the interest of play partners and may thus

be rejected on the basis of submissiveness.

Field Independence-Dependence and Playfulness in Early Adolescence

The view that sociability increases with age (Greenwood, Todd, Hops, & Walker, 1982; Parten, 1932) suggests that the lack of social play behaviour or a playful attitude in early adolescence may be a cause of concern for educators and psychologists (Rubin et al., 1990). While solitary or nonsocial activity is considered adaptive behaviour during the early years of childhood (Rubin, Fein, & Vandenberg, 1983), the significance of peer interaction during early adolescence may place the behaviourially inhibited and anxious child at risk for being negatively perceived by other children and consequently socially isolated or rejected (Rubin, et al., 1990; Younger & Boyko, 1987).

Sullivan (1953) contends that peer relations during early adolescence help shape an individual's personality and alleges that children who avoid peer interactions or withdraw from the social milieu may be at risk of developing problems in the social-cognitive and social-behaviourial domains. Russell, Peplau and Cutrona (1980) support Sullivan's personality theory by reporting data indicating that social relationships during adolescence are significantly connected to the quality of adult relationships. Furthermore, based on personality (Sullivan, 1953) and attachment (Bowlby, 1969, Sroufe, 1983) theories, Rubin et al. (1990) and Coie (1990) among others, suggest that a self-perpetuating cycle exists, in that a child's failure to develop cognitive and social skills leads to further anxiety and withdrawal from the social milieu.

Research on children's self-perceptions and affective experiences in peer relations is minimal and mainly deals with sociometric status that is based on play behaviours among peers (i.e., the higher the sociometric status, the greater the popularity). The extent to which peer relationships affect one's self-concept may be dependent upon what aspect of the self is valued most by the individual (Parker & Asher, 1987). For example, unpopular children who base their feelings of self-worth solely on peer relations may possess a more negative sense of self than children who derive their feelings of self-worth from other areas such as family relations or academics (Coie, 1990). Accordingly, studies have found that during preadolescence, the social aspect of the self-concept takes on an increasingly significant role in the re-definition of the self (Kurdek & Krile, 1982; Parker & Asher, 1987). More specifically, self-concept studies of female adolescents have illustrated that females' self-perceptions of their interpersonal relationships (family and peers) have the greatest effect on their overall feelings of self-worth (CTF, 1991; Edwards, 1993).

The majority of research on self-concept and social behaviour indicates that self-esteem is positively related to play behaviours and social status (i.e., popularity) (Ladd, 1990; Rubin, Daniels-Beirness, & Bream, 1983). In contrast, unpopular children, compared to their more popular peers, perceive themselves to be less socially competent (Hymel, 1983; Kurdek & Krile, 1982) and have low self-esteem (e.g., Finn, 1985; Putallaz, White, & Shipman, 1985). These results support the conjecture of Coie (1990) and other researchers (Smilansky, 1968; Wolfgang, 1977) that the lack of peer relations and social play during early adolescence may reflect

underlying maladjustment in affective and cognitive development.

Anxiety or social anxiety (Rubin et al., 1990) may play a mediating role in the relationship between social cognition and playfulness behaviour. Individual differences in playfulness during adolescence may reflect underlying anxiety, which in turn, may reflect a negative self-concept (Johnson, Christie, & Yawkey, 1987; Rosenberg, 1989). In contrast to Horney's (1950) belief that anxiety generates low self-esteem which causes a person to retreat into a world of imagination, Rosenberg asserts that four related factors of self-esteem contribute to anxiety including: instability of self, presenting self (maintenance of a facade), psychological vulnerability, and feelings of psychic isolation or loneliness. Rosenberg's study of 15-19 year-olds found that adolescents with low self-esteem felt inhibited and unable to behave spontaneously with others.

Similarly, Rubin et al. (1990) expand on Rosenberg's (1989) findings by speculating that anxiety in peer situations may inhibit successful social strategies, leading to social failure, which may subsequently lead to negative self-perceptions of social competence. Support for Rosenberg and Rubin et al.'s theories is derived from recent studies on affective experiences in peer relations revealing that social anxiety is positively related to loneliness and social avoidance (Hymel & Franke, 1985; Rubin & Mills, 1988).

Field Independence-Dependence, Self-Concept and Playfulness

Although playful behaviour may reflect children's cognitive styles and self-concepts, limited and inconsistent research exists on the relationships among these

three variables. One study on the association between field independence-dependence and sociometric status among kindergarteners (Dreyer, McIntire, & Dreyer, 1973) found that during free-play in kindergarten, sociometric status was the greatest for FD girls and FI boys, and that FI girls and FD boys received the lowest peer ratings. Similarly, both Iscoe and Carden (1961) and Vernon (1972) found that among 11-14 year-olds, social popularity was related to field dependence (FD) in girls and field independence (FI) in boys. Likewise, studies on the popularity of FI/FD at the late adolescent and adult levels provide further support for the contention that field dependence is related to social popularity in females (Oltman, et., al. 1975; Wong, 1976). Thus, such results suggest that differential effects of field independence-dependence on social-cognitive development may be gender-related.

The importance of investigating the social-emotional and social-behaviourial characteristics of FI/FD individuals also stems from research on moral development in young children (Campbell & Douglas, 1972; Schleifer & Douglas, 1973). Such studies discovered FI 4-6 year-olds appeared to be more reflective, morally mature, autonomous and less aggressive than FD children. In addition, FI children's teachers rated them higher on moral maturity and attentiveness than FD children (Campbell & Douglas, 1972). Similarly, an investigation of gender differences found in relation to FI/FD among 145 gifted preschool children found girls were more likely to be FI than boys (Steele, 1989).

Vernon's (1972) assumption that a coherent self-structure in FD adolescent girls enables them to be socially competent supports Witkin and Goodenough's (1981)

theory that FD individuals are more socially oriented than FI individuals. However, conclusions based on the above studies remain inconsistent with results obtained from self-consistency studies on adolescent girls that claim FI have a consistent and coherent sense of self (Schenkel, 1975; Bhatnagar & Rastogi, 1988). Such conflicting results support Witkin and Goodenough's (1981) proposal that future research on cognitive style needs to focus on the social and affective domains including the effects of gender.

The supposition that FD girls are more socially popular than FI girls receives further justification from recent studies of girl's self-concepts (Gilligan, 1991; Marsh, 1989). Adolescent girls have been found to value social relationships more than other aspects of their life (Gilligan, 1991; Rogers, 1993) and their social self-concept has subsequently been found to have a greater effect on their self-structure than other self-concept domains (Dusek & Flaherty, 1981; Harter, 1982). In addition to placing more emphasis on the social aspect of the self-concept, a study of 961 female students aged 11-19 (CTF, 1991) found that physical appearance and how others perceived them figured prominently in their self-perceptions.

Research has discovered that the majority of girls experience a loss of self-confidence and develop a negative self-concept upon entering adolescence (Daley, 1990; Gilligan, 1991; Marsh, 1989) and report more occurrences of depression (Kandel & Davies, 1982), loneliness (Ostrov & Offer, 1978) and quiet disturbance (Offer, Howard, & Ostrov, 1986) than adolescent boys. Similarly, studies on self-images in preadolescence have shown that perceptions about weight produce the

largest gender-related differences of any measure and are more salient for pubertal girls than for boys (Tobin-Richards, Boxer, & Peterson, 1983). For example, Crockett and Peterson (1987) found that among grade 7 and 8 students, boys perceived their bodies significantly more positively than girls in terms of overall body image with self-satisfaction positively related to physical maturity while the reverse was found for girls. Accordingly, further studies on the self-concept of pubertal girls illustrate that females who experience deficits in self-concept (especially physical) may be at risk for developing eating disorders (Chernin, 1985; Orbach, 1986; Weinreich, Doherty, & Harris, 1985). Hence, the contention that early adolescence is a time of psychological risk and vulnerability for girls (Elder, Nguyen, & Caspi, 1985; Peterson, 1988; Simmons, Rosenberg, & Rosenberg, 1973) warrants the need for further research on social-cognitive and affective development in young adolescent girls.

Rosenberg (1989) maintains that early adolescence is a time of increased social alienation and isolation combined with an increase of feelings of loneliness (Ostrov & Offer, 1978; Weiss, 1973). While Sullivan (1953) asserts that true loneliness cannot be experienced until preadolescence, research on the loneliness experience or feelings of being psychologically disconnected or alienated (Asher & Wheeler, 1985) have just recently been undertaken. Investigations on loneliness and withdrawn adolescents have revealed that loneliness is associated with feelings of alienation, low self-esteem and unhappiness (Rubenstein & Shaver, 1982), negative school attitude, ineffective social skills, (Jones, 1981) and lack of social acceptance (Goswick & Jones, 1982).

Likewise, studies have indicated that loneliness and withdrawal during adolescence is not transitory and may persist into adulthood (Offer & Offer, 1975; Russell, Peplau, & Cutrona, 1980).

An additional study of the various cognitive and affective characteristics of FI/FD individuals is Woodward and Kaylan-Masih's (1990) investigation of the relationship between loneliness, coping strategies and cognitive style in 52 gifted 16-18 year-olds (36 or 70% females). Results showed that FI adolescents were more likely to demonstrate autonomous and self-reliant behaviours and report feelings of loneliness in a crowd than FD adolescents. In contrast, FD adolescents only reported feelings of loneliness when they were physically alone and displayed a stronger interest in social information than FI adolescents. Woodward and Kalyan-Masih concluded that during times of stress, coping styles in FI individuals are based on more internal resources such as reading or listening to music, while coping styles in FD individuals are based on more external resources such as friends and social situations. However, due to the overrepresentation of females in the sample and their failure to investigate gender differences, Woodward and Kalyan-Masih's conclusions of the ramifications of field independence may only be applicable to females.

Woodward and Kalyan-Masih's (1990) interpretations support Witkin and Goodenough's (1981) differentiation theory that FI/FD individuals rely more on internal/external stimuli and have an impersonal/interpersonal orientation respectively. Moreover, the theory of individuation (Mahler, 1963) and differentiation (Witkin, 1950) are justified by Woodward and Kalyan-Masih's proposition that FI individuals

(mostly girls) feel more lonely due to the fact that they are more autonomous, or psychologically separated from others (Sigel, 1970) and thus feel more isolated, even when surrounded by others. In contrast, FD individuals only feel isolated when they are physically alone because they base the majority of their self-system on social interactions with others (Witkin & Goodenough, 1977).

Consistent with Woodward and Kalyan-Masih's (1990) conclusions are findings from studies that reveal adolescents with internalized styles of coping or introverts experience more anxiety, conflict (Verma & Upadhyay, 1980), loneliness and depression (Gerson & Perlman, 1979) than extroverts. Adolescents who have an internalized style of coping have also been described as being more concerned with their own subjective organization (highly self-absorbed), rarely seeking help from others and appearing very sensitive to criticism (Verma & Upadhyay, 1980).

While studies on the characteristics of lonely and socially rejected and withdrawn young adolescents are limited, similarities continue to be found between FI females/ FD males and submissive-rejected children (Asher et al., 1990). In Rubin et al.'s (1990) research on social withdrawal, a behaviourial subgroup of rejected children emerged, characterized by a timid, submissive and internalizing style of interaction versus an aggressive, externalizing style. Further studies on submissive-rejected children from third to sixth grade revealed that these children were identified as quiet, shy or nervous and preferred solitary play to social play (Parkhurst & Asher, 1987; Williams & Asher, 1987) and reported higher scores of loneliness and social dissatisfaction than aggressive-rejected and average status children (Boivin,

Thomassin, & Alain, 1988).

The results obtained from the studies on submissive-rejected children indicate similarities exist between submissive-rejected children and FI girls and FD boys (Campbell & Douglas, 1972; Dreyer, McIntire, & Dreyer, 1973; Iscoe & Carden, 1961; Saracho, 1989; Schleifer & Douglas, 1973; Vernon, 1972, Woodward & Kalyan-Masih, 1990). The fact that similarities exist between an internalizing cognitive style and field independence among females but field dependence in males, may suggest that the implications of an analytic cognitive style or FI for social and affective development may be dependent upon the child's gender (Iscoe & Carden, 1961; Tavris, 1992). Rubin (1985) postulates that the relationship between this internalizing style and peer rejection may be circular and thus have detrimental effects on future cognitive and affective development.

Rubin et al. (1990) and Coie (1990) suggest that a social-cognitive internalizing style may affect one's sense of self, which in turn, may affect one's social behaviours. In contrast, one's social experience with others (positive or negative) may determine self-attitudes and beliefs which may subsequently affect one's perceptions of the external world (Coie, 1990). Thus, different patterns found among female and male social-cognitive development suggest that both FI females and FD males may be at risk for developing psychological disorders in the areas of self-concept and interpersonal relations (Dreyer, McIntire, & Dreyer, 1973; Tavris, 1992; Vernon, 1972).

Furthermore, studies on preadolescent social-cognitive development support

recent educational and psychological literature which has focused on the impact and implications of socio-cultural factors on child development including gender equity issues (Canadian Teachers' Federation, CTF, 1991; Edwards, 1993; Ontario Ministry of Education and Training, 1994). Many educational researchers and psychologists agree that the paradoxical task of building a distinct sense of self while simultaneously remaining connected to others in a society that values the male independence model (Gilligan, 1982; Tavris, 1993; Unger & Crawford, 1992) may place the female adolescent at psychological emotional risk. More specifically, studies of field dependence and social-emotional development suggest that FI females may be at a greater risk than FD females for developing future psychological problems (Dreyer, McIntire, & Dreyer, 1973; Vernon, 1972; Welsh, 1977) and thus support the theory that stereotypic social-role expectations may have a significant negative influence on female affective and cognitive functioning (Edwards, 1993; Reis, 1987; Tavris, 1993).

For example, masculine attributes which have been associated with FI such as autonomy and analytic thinking may be more valued by society and thus more reinforced in males than females (Denmark, Russo, Frieze, & Sechzer, 1988; Reis, 1987; Tavris, 1992). Welsh's study (1977) supports this belief by finding that FI gifted, adolescent female students who preferred original to conventional approaches were rated by their teachers as less self-confident and psychologically adjusted than FD gifted female students who preferred more conventional strategies. Welsh suggests that such findings support the theory that socialization and stereotypic

experiences during the formative years of adolescence have a negative effect on a female's sense of self, especially those who are considered to have an "unfeminine" orientation such as field independence (Loeb & Jay, 1987; Reis, 1987; Tavris, 1992). In accordance with Welsh's findings, related studies on gifted girls have found that compared to other girls, gifted girls were rated by their teachers as having lower self-worth (Connelly, 1977) and exhibiting less playful behaviour (Solano, 1977). Consequently, the societal value attached to feminine characteristics which are associated with field dependence such as intuitive or global/holistic thinking may be more strongly reinforced (by teachers and parents) among girls than boys, and thus may lead to the experience of low feelings of self-worth among FD boys (Newcombe, Bandura, & Taylor, 1983; Welsh, 1977).

Additional research on spatial abilities among university students further supports the notion that people's expectations about the gender typing of a cognitive task can affect their performance (Herrmann, Crawford, & Holdsworth, in press). For example, it was found that men remembered tasks that contained masculine gender-typed labels while females remembered better when the task had a feminine gender-typed label. This finding suggests that beliefs about differences, together with a desire to fulfill gender-role stereotypes, create an opportunity for the development of self-fulfilling prophesies (Unger & Crawford, 1992). This relationship between gender-typed social roles and spatial visualization is further supported by Nash (1975) who found that male gender preference was positively related to spatial performance in sixth- and ninth-grade boys and girls. In other words, girls and boys who

preferred to be male scored higher on a spatial visualization task than boys and girls who preferred to be female. Furthermore, although gender differences were not investigated, students who perceived themselves as more feminine achieved lower math scores than students who perceived themselves as more masculine (Van Blerkom, 1988).

In agreement with Nash (1975) and Welsh (1977), Van Blerkom (1988) concluded that masculine attributes and preferences are a better predictor of spatial performance than gender itself and proposed that children who perceive themselves as masculine are more practised in spatial-skill related play. Such findings thus imply that stereoptypic social-role expectations (imposed by teachers, parents and the self) may influence affective and cognitive development among both female and male preadolescent students (CTF, 1991; Vernon, 1972; Welsh, 1977) and thus warrant the need for further research on gender differences in such areas as field dependence, self-concept and playfulness.

Summary and Goals of the Present Study

Psychological changes during preadolescence appear to be the result of a complex interaction of interpersonal, cognitive and social processes. The past decade has seen a surge of educational research on children's social concepts based on the theoretical writings of cognitive psychologists (e.g., Bruner, 1969; Piaget, 1962; Vygotsky, 1966). While the areas of field independence-dependence, self-concept and playfulness have important roles in children's social-cognitive development, few studies exist on the relationships between these concepts during preadolescence.

Furthermore, although significant correlations have been found to exist between field independence-dependence and self-concept (Bhatnager & Rastogli, 1985; Change, 1984; Schenkey, 1985; 1986a; 1986b); and self-concept and playfulness (Coie, 1990; Smilansky, 1968; Wolfgang, 1977), limited and inconsistent research exists on the relationship among all three variables.

Although playfulness behaviour may reflect children's cognitive styles and self-concepts, research in the affective and social domains of field independence-dependence remains limited. The majority of studies on both young children and adults have shown, in general, that field dependent individuals possess a more social or interpersonal orientation that field independent individuals who prefer solitary situations to social ones (Coates, Lord, & Jackabovics, 1975; Oltman, Goodenough, Witkin, Freedman, & Friedman, 1975; Pederson & Waldrop, 1967; Ruble & Nakamura, 1972; Saracho, 1989). Moreover, the conjecture that a lack of a playful attitude and social play behaviour may reflect underlying maladjustment in affective and cognitive development (Coie, 1990; Lieberman, 1977a; Smilansky, 1968; Wolfgang, 1977) has been supported by research on self-concept and social behaviour which has found that a positive self-concept is positively related to play behaviours and social status (Ladd, 1990; Rubin, Daniels-Beirness, & Bream, 1983).

Additionally, studies on the association among field independence-dependence and sociometric status in preschoolers (Dreyer, McIntire, & Dreyer, 1973) and in preadolescents (Iscoe & Cardin, 1961; Vernon, 1972) have found that social popularity is related to field dependence in girls and field independence in boys. In

contrast, research on field independence-dependence and self-concept in young adults shows that field independent individuals, particularly girls, possess a more positive and psychosocially developed sense of identity than field dependent students (Bhatnagar & Rastogi, 1986; Jain, Bhatnagar, & Rastogi, 1988). Thus, results of conflicting studies on social status and self-concept of field independent-dependent individuals, combined with the recent research of socio-cultural factors on preadolescent social-cognitive development, especially stereotypic social-role expectations, warrants the need for further research on social-cognitive and affective development in preadolescents.

Accordingly, through the investigation of the connections between field independence-dependence, self-concept and playfulness among preadolescents, the goal of the present study is twofold: 1) to increase educators' and parents' understanding and awareness of the significant role all three concepts occupy in the preadolescent inner and social world; and 2) to illustrate the influence of stereotypic gender-roles on psychological development by exploring the patterns that may exist among the three variables for each gender. Thus, through the study of both the cognitive components (field independence-dependence) and affective components (self-concept and playfulness) of preadolescent development, the present study is particularly relevant to education by enabling educators to recognize and understand the critical roles both cognition and affect play in the learning process.

Research Questions and Hypotheses

This exploratory study examined the characteristics of the relations between

cognitive style (field independence-dependence), self-concept and playfulness in preadolescents. It was attempted to determine if cognitive style accounted for individual differences in self-concept and playfulness attitudes and if different patterns existed in the relationships between the three primary variables according to gender. Moreover, this study attempted to answer the question: Will field independence-dependence conceived as an expression of the self-nonself aspect of differentiation have implications for self-concept and/or a playfulness disposition, with regards to gender?

The following questions were also investigated separately for males and females to determine if distinct patterns exist for each gender:

(a) Will FI/FD students differ with respect to self-concept and a playfulness disposition?

(b) Will the various self-concept components and playfulness dimensions differ in their relationship to field independence-dependence and playfulness?

The independent variable consisted of gender and cognitive style as measured by field independence-dependence (Witkin, 1950) and was conceptualized as an expression of the self-nonself aspect of psychological differentiation (Witkin & Goodenough, 1981). The dependent variables in the study included 1) a playfulness disposition or a combination of five categories of playful behaviours and attitudes including physical, social and cognitive spontaneity, manifest joy and sense of humour (Lieberman, 1977a), and 2) self-concept conceived of as a multidimensional

phenomenon consisting of the four self-dimensions proposed by Coopersmith (1967) which include: peers, parents, school and self.

Based on past relevant research, the following hypotheses were made:

1. It was predicted that a significant relationship between cognitive style, self-concept and playfulness would exist in both female and male preadolescent students.
2. Significant gender differences were expected to be found in relation to field independence-dependence, self-concept and playfulness.
3. Among female students field independence would be (a) negatively associated with self-concept (i.e., as GEFT scores increased, SEI scores would decrease), and (b) negatively associated with playfulness (i.e., as GEFT scores increased, PF-NonPF scores would decrease).
4. Among male students, field independence would be (a) positively associated with self-concept (i.e., as GEFT scores increased, SEI scores would also increase) and (b) positively associated with playfulness (i.e., as GEFT scores increased, PF-NonPF scores would also increase).

CHAPTER III

METHODOLOGY

Introduction

The main purpose of this study was to investigate the possible relationships between field independence-dependence, self-concept and playfulness in Grade 6 girls and boys. The following chapter includes a description of the study's participants, followed by a description of the three test instruments; Coopersmith's (1967) SEI, Lieberman's (1977b) PF-NonPF Scale and Oltman, Raskin and Witkin's (1971) GEFT which were used to measure self-concept, playfulness and field independence-dependence respectively. The final section describes the procedures that were followed during data collection including the debriefing.

Participants

This study was based on a convenience sample of 96 students from four sixth-grade classes from three schools located within a Southwestern Ontario city. The schools were chosen from one school board and were selected to provide a range of socio-economic backgrounds, with one school serving primarily lower-middle class students, one school serving middle class students and one school serving middle-upper class students. The schools were also chosen based on the availability of the students' previous teachers. The study included the students' current sixth-grade teachers consisting of two female and two male teachers, and five teachers (two female and three male) who had taught the students in Grade 5.

Parental Consent Forms were sent to 96 students, and only those students who returned their signed forms were allowed to participate. Sixty-seven students returned their forms (70% return rate); subsequently, four of these students were excluded from the study because they were absent during testing. The final sample consisted of 63 students (33 girls, 30 boys), ranging in age from 11 to 12 years ($\underline{M}$ = 11.08, $\underline{SD}$ = .27).

This age group (11-12 year-olds) was chosen because early adolescence is a pivotal time in 1) cognitive development (emergence of abstract/reflective thought) (e.g., Vygotsky, 1966), 2) self-concept formation (occurrence of self-conflict and re-organization) (e.g., Damon & Hart, 1988) and 3) social development (increase in significance of peers' influence on self-concept) (e.g., Rosenberg, 1985). Similarly, during the preadolescent years past literature has shown that traditional feminine and masculine characteristics become increasingly emphasized (e.g., Fox, 1981; Unger & Crawford, 1992) while girls and boys also experience an increased desire to fulfill cultural gender-role stereotypes (e.g., Abrams, 1989). Further rationale for the chosen age group included the lack of recent consistent and conclusive research in the three areas of field independence, self-concept and playfulness among preadolescents, particularly regarding females (e.g., Tavris, 1992).

Instrumentation

Two questionnaires and one spatial-perception test were administered: Coopersmith's (1967) Self-Esteem Inventory (SEI) Form A; Playfulness - Nonplayfulness Scale (PF-NonPF; Lieberman, 1977a) Form A and the Group

Embedded Figures Test (GEFT; Oltman, Raskin & Witkin, 1971). Demographic information including age and gender was also collected All measures can be found in Appendix A.

Self-esteem inventory (SEI). Form A of the SEI is a 58 item self-report inventory designed by Coopersmith (1967) to assess self-esteem or the perception of self-worth. The SEI is one of the most frequently used affective scales in studies of children and adolescents (Battle, 1991). The instrument consists of five subscales with one lie scale (8 items) designed to measure defensiveness; the remaining 4 subscales which are concerned with self-evaluation in four areas: peers (8 items) (e.g., "I'm popular with kids my own age"); parents (8 items) (e.g., "My parents usually consider my feelings"); school (8 items) (e.g., "I often get discouraged in school") and the more general area of one's perception of the self regarding various personal traits and abilities (26 items) (e.g., "I'm pretty sure of myself"). The students check each item "like me" or "unlike me"; and excluding the lie scale, scores are reported as either the total number "like me" on each subscale (peers, parents and school; 0 - 8), (personal, 0 - 26) or a total score (0 - 50). The test-retest reliability correlation for 30 5th grade students over a 5 week period was .88 (Battle, 1991).

Playfulness-nonplayfulness scale (PF-NonPF). Form A of the PF-NonPF is a 10 item rating scale inventory designed by Lieberman (1977b) to assess playfulness behaviour and attitudes and is currently the only existing questionnaire to measure playfulness as a personality trait. The PF-NonPF consists of 5, two-item subscales corresponding to five behaviourial traits: manifest joy, sense of humour, social,

physical and cognitive spontaneity. The first and second items of each subscale refer to the quantity and the quality of the trait measured, respectively. Internal consistency is high with item reliabilities ranging from .34 to .89 (Cronbach's alpha). Additionally, in the standardization sample, the possibility of a halo effect was controlled for by the inclusion of two items that measured intelligence and physical attractiveness which were found not to be significantly related to playfulness.

Ratings are measured on a 5 point scale, with sample behaviours given for each trait to be measured at the extreme ends of each scale. For example, the behaviourial trait of physical spontaneity is defined by 1 representing a "student who appears physically rigid" and 5 represents a "student who is physically on the move." The score on the questionnaire is the total sum of the rating scales with scores ranging from 10 to 50 (10 and 50 representing low and high incidences of playful personality traits respectively). Concurrent validity was determined from significant correlations between normalized teachers' rankings of a global playfulness total scale and the subscale ratings on PF-NonPF components (Lieberman, 1977a). Further reliability and validity were derived from a standardization sample (N=158) on which ratings from two teachers were available. The range of item validity coefficients was from .32 to .63 on test, and from .35 to .72 on retest. The obtained test-retest reliability correlation was .90.

Group embedded figures test (GEFT). Oltman, Raskin and Witkin's (1971) GEFT is a group administered adaptation of Witkin's (1950) individually administered Embedded Figures Test (EFT), designed to measure the cognitive style of field

independence-dependence (the ability to locate hidden objects in a distracting visual context). Due to time constraints within the educational setting, many school researchers have used the GEFT in place of the EFT to measure cognitive style of school-aged children (e.g., Pargman, Bender, & Deshaies, 1975; Woodward & Kalyan-Marsh, 1990; Williams, 1975; Witkin & Goodenough, 1981). The GEFT is a test booklet modelled on the original EFT with respect to presentation mode and format, containing 3 sections of 18 increasingly complex geometric figures (17 from the EFT) with the First Section or Practice Section containing 7 figures, and the Second and Third sections each containing 9 figures. The perceptual task involves locating a series of Simple Forms embedded within a complex figures by tracing the outline of the simple geometric shape. Participants are requested to trace as many of the Simple Forms as they can within a time limit of 2 minutes for the Practice Section and 5 minutes for the Second and Third Sections.

Scores are obtained by comparing each traced Simple Form to the template provided by the GEFT scoring key. Students receive a score of 1 for each correct tracing of the Simple Form (e.g., all lines of the Simple Form must be traced with no added extra lines; if extra lines are added they must be completely erased). The scores for the test are the number of Simple Forms correctly traced in the Second and Third Sections combined (the First Section is not scored), ranging from 0 to 18 with 0 representing a high field-dependent orientation and 18 representing a high field-independent orientation. The colour of the figures in the original EFT is replaced by light shading of similar sections and similar to the individually administered version,

the subject is prevented from simultaneously seeing the Simple and Complex Form by having the Simple Forms printed on the back cover of the GEFT booklet and the Complex Figures on the booklet pages.

Oltman, Raskin and Witkin (1971) standardized the GEFT obtaining a test-retest reliability (Spearman-Brown coefficients) of .82 for both males (N = 80) and females (N = 97) which is comparable to the test-retest reliabilities of the original EFT (.82 for men, N = 51; .79 for women, N = 51). Furthermore, the standardization of the GEFT obtained criterion validity coefficients of .82 (N = 73) and .63 (N = 63) for males and females respectively.

Procedure

Establishing contacts and consent. Upon written permission received from the participating school board (see Appendix B), the researcher contacted the principal of each of the participating schools and arranged a meeting with the principals and the teachers who were to be involved in the study. Prior to the meetings, cover letters and Informed Consent Forms were distributed to both the principals and teachers (see Appendix C to F). After receiving written permission from the principals and signed Consent Forms from the teachers, the researcher entered each classroom for a brief introductory presentation and distributed cover letters (see Appendix G) and Parental Consent Forms (see Appendix F). The researcher returned to the participating schools periodically for two weeks to collect the Parental Consent Forms. Only those students who returned the Consent Form signed by their parents participated in the study.

Administration of the group embedded figures test (Oltman, Raskin & Witkin, 1971) and Coopersmith's (1967) self-esteem inventory (SEI). Testing was conducted in one-hour periods at each of the three schools over a three day period. In two of the schools, testing was conducted in the Grade 6 classroom. In the school in which two Grade 6 classes were tested, the participants were placed into one classroom. The researcher administered the GEFT and the SEI to the students, allowing completion times of 20 and 30 minutes respectively. To ensure confidentiality, subject numbers were assigned to each participant and the students were instructed not to place any identifying information on the questionnaires. The researcher reminded students that the tests were not related to academic achievement and the results would remain confidential. The students were also reminded to complete the tests to the best of their ability and to respect their fellow classmates by not talking during the testing. Non-participating students worked on activities that had been previously assigned by their teacher.

Once the GEFT booklets and the pencils were distributed, the researcher followed the directions found in the Embedded Figures Test Manual (Witkin et al., 1971) (see Appendix A).

Upon completion of the GEFT, the SEI questionnaires were distributed to the students and the researcher read the preliminary instructions:

> Read each sentence carefully. If the sentence describes how you usually feel, put a check in the column "Like Me." If the sentence does not describe how you usually feel, put

a check in the column "Unlike Me." There are no right or wrong answers (Coopersmith, 1959, p. 88).

The researcher read aloud the 58 sentences allowing the students to complete each question. To increase comprehension, students were asked to raise their hand if they did not understand any of the sentences and the researcher would attempt to define the statement in similar terms. Once the subjects had completed the SEI, the researcher collected all of the questionnaires for subsequent scoring and analysis.

Administration of Lieberman's (1977b) playfulness-nonplayfulness scale (PF-NonPF) form A. Prior to the testing sessions, the PF-NonPF Scale was completed by the students' present (Grade 6) teacher and previous (Grade 5) teacher at different times. Each teacher was asked to read the rating instructions and then to complete the questionnaire for each child participating in the study. Following the administration of the classroom instruments, the completed rating scales were collected for data analysis.

Debriefing. Two months after the testing sessions, the researcher returned to the three participating schools to distribute parental thank-you letters to the students who participated which included a brief summary of the study's results (see Appendix H). In addition, the researcher briefly explained to the students (5 - 10 minutes) the main findings of the study and provided an opportunity for the students to ask questions or mention any concerns.

CHAPTER IV

RESULTS

Introduction

Preliminary analyses of the present study's data included a three (School) by two (Gender) analysis of variance to determine whether the scores on the three primary measures differed significantly on these variables. Pearson correlations were computed between the current and the previous teachers' playfulness ratings to determine teacher rating reliability. Gender differences were further examined by subsequent t -tests between all of the measures. Pearson correlations were obtained between all measures for the total sample and separately for girls and boys to determine if distinct gender patterns existed among the scores and to examine the multidimensionality aspects of self-concept and playfulness. Finally, each of the hypotheses was addressed based on relevant analyses followed by exploratory analyses including a two (Gender) by two (Field independence-dependence) analysis of variance for self-concept scores and playfulness ratings.

Preliminary Analyses

Reliability of teachers' playfulness ratings (PF-NonPF). To ascertain the reliability of the students' current teachers' PF-NonPF ratings, Pearson correlations were computed between the current and previous teachers' PF-NonPF total and subtotal ratings. A significant, positive correlation ($r = .85$, $p < .01$) was found between the current ($N = 63$) and the previous teachers' ($N = 60$) PF-NonPF total rating scores. In addition, the Pearson correlations calculated for each of the five PF-

NonPF subscales resulted in significant positive correlations ranging from .61 (Cognitive Spontaneity) to .79 (Manifest Joy). These significant correlations indicated that the current teachers' playfulness ratings of the students was an adequate and reliable measure of the students' playfulness behaviour and attitudes. Furthermore, previous teachers could not be located for the three newly registered students. Consequently, the previous teachers' playfulness ratings were eliminated from the remainder of the analyses.

Three (School) by Two (Gender) Analysis of Variance ANOVA. Due to the varied socio-economic backgrounds of the students, the possibility of differences among the three schools could not be ignored. Therefore 3 (School) X 2 (Gender) ANOVAs were performed on each of the measures to check for significant main or interaction effects. Results indicated no significant main effects for school on any of the measures. In other words, the students' mean scores did not differ significantly among each of the three schools.

No significant main effects were found for gender, although two marginal ($p < .10$) gender main effects existed for peer self-concept, $F(1, 57) = 3.26$, and school self-concept, $F(1,57) = 3.15$. No significant interaction effects were found. Consequently, school as a variable was eliminated from further analyses.

Pearson Correlations Between SEI Total and SFI Subscales. To investigate the relationships between the four self-concept constituents and the total self-concept, Pearson correlations were calculated separately for girls ($n = 33$) and for boys ($n = 30$) between the four self-concept scores and the total score (see Table 1). The lack

Table 1

Pearson Intercorrelations Between Total SEI Score and the SEI Subscales

	Students	
	Girls (n = 33)	Boys (n = 30)
Measure	SEI Total	
SEI		
Peer	.54**	.58**
Parent	.73**	.39*
School	.41*	.52**
Personal	.91**	.85**

Note. SEI = Self-Esteem Inventory.

*p < .05. **p < .01.

of significant different ($t(61) = 1.38$, $p > .05$) and low scores found for both girls ($M = 2.39$) and boys ($M = 2.17$) on the lie subscale provided support for internal validity and was eliminated from further analyses. For both girls and boys, all subscale scores correlated positively and significantly ($p < .01$ or $p < .05$) with the total self-concept score (see Table 1). The inflated correlation between Personal self-concept (SEIPL) and the total for both girls ($r = .91$) and boys ($r = .85$) is due to the fact that the personal subscale is a large component of the total score, referring to one's overall personal view of oneself (Coopersmith, 1967). Hence, with the exception of personal self-concept, Table 1 illustrates that for girls, parent self-concept obtained the strongest correlation ($r = .73$) in contrast to boys whose parent self-concepts obtained the weakest correlation ($r = .39$). These results support the contention that self-concept is multidimensional rather than unidimensional (e.g., Coopersmith, 1967; Marsh, 1984), and suggest that according to gender, different patterns may exist between the relationships of the various self-concept dimensions found within the self-system. For example, results indicate that school self-concept may have the least influence on the total self-worth of preadolescent girls whereas parent self-concept may have the least amount of influence on the total self-worth of preadolescent boys.

Pearson Correlations Between PF-NonPF Total and PF-NonPF Subscales. Pearson correlations were calculated between the Total Playfulness rating and each of the five playfulness subscales (see Table 2) for both girls and boys. Investigation of the Pearson correlation coefficients revealed that for both girls and boys, all five of

Table 2

Pearson Intercorrelations Between Total PF-NonPF Rating and the PF-NonPF Subscales

	Students	
	Girls (n = 33)	Boys (n = 30)
Measure	PF-NonPF Total	
PF-NonPF		
Physical Spontaneity	.84**	.88**
Manifest Joy	.85**	.92**
Sense of Humour	.88**	.86**
Social Spontaneity	.92**	.81**
Cognitive Spontaneity	.71**	.64**

Note. PF-NonPF = current teachers' playfulness-nonplayfulness rating of students.

**p < .01.

the playfulness subscales correlated positively with the total playfulness rating ($p < .01$) with correlation coefficients ranging from .71 (Cognitive Spontaneity - Playfulness Total) to .92 (Social Spontaneity - Playfulness Total) for girls and .64 (Cognitive Spontaneity - Playfulness Total) to .92 (Manifest Joy - Playfulness Total) for boys. These results indicate that the dimension of cognitive spontaneity has the least amount of influence over the teacher's total playfulness rating of the student, whereas social spontaneity and manifest joy have the greatest amount of influence over the teacher's total playfulness ratings of girls and boys respectively. Thus, these results suggest that teacher's perceptions of playfulness may differ according to gender (Lieberman, 1977a) (i.e., playfulness may be represented by different behaviours and attitudes among girls and boys).

Hypothesis 1: Relationships Between Field Independence-Dependence, Self-Concept and Playfulness.

It was hypothesized that significant correlations would exist for the entire sample ($N = 63$) between the GEFT, SEI scores and PF-NonPF scores representing field independence-dependence, self-concept and playfulness respectively. To ascertain the relationships between the three primary variables, Pearson correlations were computed between the scores of the GEFT, SEI and PF-NonPF. Table 3 indicates that, contrary to expectation, no significant correlations were obtained for the entire sample between the GEFT and the SEI. The reason for this lack of significance becomes apparent with the examination of the reults of the separate analyses of girls and boys.

Table 3

Pearson Correlations Between the GEFT, PF-NonPF and SEI for Entire Sample (N = 63)

Measure	GEFT	PF-NonPF					
		PS	MJ	SH	SS	CS	TOTAL
GEFT	-	-.20	-.12	-.22	-.11	-.08	-.19
SEI							
PE	.06	.29*	.26*	.28*	.29*	.33*	.36*
PR	.07	.21	.18	.13	.09	.12	.17
SC	-.03	.13	.17	.16	.25	-.03	.17
PL	.04	.08	.04	-.01	.19	.04	.08
TOTAL	.04	.19	.19	.16	.25	.08	.22

Note. GEFT = group embedded figures test. PF-NonPF = playfulness-nonPlayfulness scale. PS = physical spontaneity. MJ = manifest joy. SH = sense of humour. SC = social spontaneity. CS = cognitive spontaneity. TOTAL = current teachers' total playfulness rating. SEI = self-esteem inventory. PE = peers self-concept. PR = parents self-concept. SC = school self-concept. PL = personal self-concept. TOTAL = total self-esteem score.

*$p < .05$.

Hypothesis 2: Gender Comparisons of GEFT Scores, SEI Scores and PF-NonPF Ratings.

It was hypothesized that significant gender differences would occur between the three total scores of the GEFT, SEI and PF-NonPF. The differences between the girls and boys total scores were evaluated using independent t-tests (see Tables 4 & 5) and contrary to expectation, no significant gender differences between the total scores of the GEFT, SEI and PF-NonPF were found. The absence of significant gender differences for self-concept and playfulness support normative data conducted by Coopersmith (1967) and Lieberman (1977a) which found no significant gender differences to exist for the SEI and the PF-NonPF respectively. In contrast, the absence of a significant difference for the GEFT is inconsistent with past research that has indicated boys obtain higher GEFT scores or are more field independent than girls (e.g., Van Blerkom, 1988; Witkin & Goodenough, 1977).

However, Table 4 indicates partial support for the hypothesis by revealing marginal gender differences ($p < .10$) for school (SEISC) ($t(61) = 1.70$) and peer self-concept (SEIPE) ($t(61) = 1.74$). Examination of the means (see Table 4) indicate that girls ($N = 33$) scored higher than boys ($n = 30$) on both self-concept scores, obtaining means of 5.97 (SEIPE) and 5.50 (SEISC) compared to the boys' mean scores of 5.26 and 4.80 respectively. Table 5 indicates a marginal gender difference for cognitive spontaneity ($t(61) = -1.79$, $p < .10$); examination of the means indicates that teachers rated girls ($M = 5.91$) marginally lower than boys ($M = 6.40$) on this playfulness subscale of cognitive spontaneity.

Table 4

Mean Scores, Standard Deviations and T-test Results to Indicate Gender Differences Between GEFT and SEI

	Students					
	Girls (n = 33)		Boys (n = 30)			
Measure	M	SD	M	SD	T	p
GEFT	9.51	(2.69)	10.00	(3.29)	.64	.52
SEI						
PE	5.97	(1.59)	5.26	(1.60)	1.74	.09*
PR	5.87	(1.76)	6.40	(1.40)	1.38	.22
SC	5.50	(1.46)	4.80	(1.70)	1.70	.09*
PL	18.90	(4.08)	19.4	(4.80)	.44	.66
TOTAL	36.52	(6.50)	35.56	(3.60)	.59	.56

Note. GEFT (group embedded figures test), range = 0 - 18. SEI (self-esteem inventory), PE (peer SEI), range = 0 - 8. PR (parent SEI), range = 0 - 8. SC (school SEI), range = 0 - 8. PL (personal SEI), range = 0 - 26.

* $p < .10$.

Table 5

Mean Scores, Standard Deviations and T-test Results to Indicate Gender Differences in PF-NonPF Ratings

	Students					
	Girls (n = 33)		Boys (n = 30)			
Measure	M	SD	M	SD	T	p
PF-NonPF						
PS	6.30	(1.39)	6.97	(2.13)	-1.48	.14
MJ	6.97	(1.59)	7.10	(2.12)	-.28	.78
SH	6.61	(1.35)	6.93	(1.72)	-.85	.40
SS	6.82	(1.70)	6.73	(1.98)	-.18	.86
CS	5.91	(1.10)	6.40	(1.07)	-1.79	.08*
TOTAL	32.72	(6.10)	35.56	(3.60)	.68	.50

Note. PF-NonPF = Playfulness-NonPlayfulness Scale. PS = physical spontaneity. MJ = manifest joy. SH = sense of humour. SS = social spontaneity. CS = cognitive spontaneity. All subscales range = 2 - 10. TOTAL (Current teacherrs' total playfulness score), range = 10 - 50. * $p < .10$.

item analyses of the PF-NonPF scale revealed partial support for the hypothesis by showing significant gender differences on two separate questionnaire items: 1) Item #1 (measuring physical spontaneity), $t(61) = -2.88$, $p < .01$, indicating that girls ($M = 5.91$) were rated significantly less physically spontaneous than boys ($M = 6.40$) and 2) Item #10 (measuring cognitive spontaneity), $t(61)=3.65$, $p < .001$ with girls ($M = 2.46$) obtaining lower ratings in cognitive spontaneity than boys ($M = 3.65$). In summary, results of the t-test analyses for gender differences illustrate a trend for girls to report greater feelings of self-worth and receive lower playfulness ratings from their teachers than boys.

Hypothesis 3: Relationships Between Field Independence, Self-Concept and Playfulness Among Preadolescent Girls

a. The hypothesis that, for girls, field independence would be negatively associated with self-concept was confirmed. To ascertain the relationship between field independence and self-concept, Pearson correlations were computed between the GEFT scores and the SEI scores. Table 6 indicates a significant negative correlation between the GEFT and the total SEI scale ($r = -.36$, $p < .05$). Examination of subscale scores indicates that all of the SEI subscale scores correlated negatively with the GEFT score. In particular, school self-concept (SEISC) score and the SEI Total scores reached significance at the .05 level with the correlations for personal and peers self-concept reaching a marginal level of significance ($p < .10$). The only self-concept subscale not significantly correlated with the GEFT was the parents subscale (SEIPR). These results suggest that as girls increased in field independence, their

Table 6

Pearson Correlations Between the GEFT, PF-NonPF and SEI for Girls (n = 33)

Measure	GEFT	PF-NonPF Scale					
		PS	MJ	SH	SS	CS	TOTAL
GEFT	-	-.46*	-.29	-.53**	-.44*	-.51**	-.52**
SEI							
PE	-.27	.42*	.30	.45*	.42*	.52**	.48**
PR	-.03	.26	.12	.16	.27	.19	.28
SC	-.36*	.15	.13	.14	.19	-.03	.15
PL	-.32	.18	.19	.22	.24	.08	.22
TOTAL	-.36*	.33	.32	.35*	.38*	.22	.38*

Note. GEFT = group embedded figures test. PF-NonPF = playfulness-nonPlayfulness scale. SEI = self-esteem inventory. PS = physical spontaneity. MJ = manifest joy. SH = sense of humour. SC = social spontaneity. CS = cognitive spontaneity. TOTAL = current teachers' total playfulness rating.

PE = peers self-concept. PR = parents self-concept. SC = school self-concept. PL = personal self-concept.

*$p < .05$. **$p < .01$.

self-concept decreased, especially in the areas of school, personal and peers.

b. The hypothesis that, for girls, field independence would be negatively associated with playfulness was also confirmed. The relationship between field independence and playfulness was investigated by computing Pearson correlations between the GEFT scores and the PF-NonPF ratings (total and five subtotals). Table 6 shows a significant negative correlation between the GEFT scores and the total Playfulness ratings (PLAYT), $r = -.53$, $p < .01$, which indicates that as expected, as girls increased in field independence, their total playfulness ratings decreased. Examination of the correlations between the GEFT and the Playfulness subscales indicates that all subscales except Manifest Joy contributed to this effect. With the exception of Manifest Joy, all correlation coefficients between the GEFT and the PF-NonPF reached the .01 level of significance.

Although no specific predictions were made regarding the relationship between the self-concept subscales and the playfulness subscales, Table 6 reveals that the total playfulness score correlated positively and significantly with the total SEI scale ($r = .38$, $p < .05$) and the peers subscale ($r = .48$, $p < .01$). Similarly, positive correlation coefficients were obtained between the SEI Total score and the five PF-NonPF subscales ranging from .22 to .38 (only Sense of Humour (SH) and Social Spontantiety (SS) reached significance). These results suggest that, as girls increased in their self-concept scores (particularly in peer self-concept), their teachers were more likely to rate them as playful (particularly in the areas of social spontaneity and sense of humour).

Hypothesis 4: Relationships Between Field Independence, Self-Concept and Playfulness Among Preadolescent Boys.

a. The hypothesis that for boys, field independence would be positively associated with self-concept was confirmed. To ascertain that relationship between field independence and self-concept, Pearson correlations were computed between the GEFT scores and the SEI scores (total and subtotals). Table 7 illustrates that the GEFT scores correlated positively with the four SEI subscales, with correlation coefficients ranging from .15 (GEFT - SEIPR) to .39 (GEFT - SEIPS), although the only significant correlation coefficients ($p < .05$) were found between the GEFT score and the SEI Total scores ($r = .42$) and the GEFT scores and the SEI Peers scores (SEIPS). These results suggest that, as predicted, as boys increased in field independence, their self-concept scores also increased, particularly with respect to peers or social self-concept.

b. The hypothesis that for boys, field independence would be positively associated with playfulness was not confirmed. The relationship between field independence and playfulness was evaluated by computing Pearson correlations between the GEFT scores and the PF-NonPF teacher ratings (total and subtotals). Contrary to prediction, Table 7 fails to illustrate significant positive correlations between the GEFT scores and the PF-NonPF Total ($r = .03$, n.s.). A marginal ($p < .10$) positive correlation of .27 was found between the GEFT scores and the cognitive spontaneity ratings suggesting that as boys increased in field independence, their teachers may have tended to rate them higher on the cognitive spontaneity scale. This

Table 7

Pearson Correlations Between the GEFT, PF-NonPF and SEI for Boys (n = 30)

Measure	GEFT	PF-NonPF Scale					
		PS	MJ	SH	SS	CS	TOTAL
GEFT	-	-.08	-.02	-.09	.14	.27	.03
SEI							
PE	.39*	.31	.26	.21	.17	.26	.30
PR	.15	.14	.08	.07	-.12	-.07	.02
SC	.25	.13	.17	.16	.25	-.03	.17
PL	.28	.00	-.08	-.18	.15	.02	-.04
TOTAL	.42*	.13	.08	.02	.17	-.03	.09

Note. GEFT = group embedded figures test. PF-NonPF = playfulness-nonPlayfulness scale. SEI = self-esteem inventory. PS = physical spontaneity. MJ = manifest joy. SH = sense of humour. SC = social spontaneity. CS = cognitive spontaneity. TOTAL = current teachers' total playfulness rating.

PE = peers self-concept. PR = parents self-concept. SC = school self-concept. PL = personal self-concept.

*$p < .05$.

result contrasts with the corresponding finding for girls (see Table 6) which showed teacher's ratings of cognitive spontaneity were more likely to decrease as girls increased in field independence. Furthermore, the absence of significant correlations between the GEFT scores and the PF-NonPF ratings suggests that field independence and playfulness may not be significantly related among preadolescent boys.

Although specific predictions were not made for the relationship between self-concept and playfulness, Table 7 reveals a positive, nonsignificant correlation between the PF-NonPF Total rating and the SEI Peers score ($r = .30$, $p < .10$); and between the SEI Total score and Social Spontaneity rating ($r = .17$, $p < .10$). These results suggest that as boys' peers self-concept scores increase, they are more likely to be rated by their teachers as playful (cognitively spontaneous). These results are similar to those found for girls where an increase in peer self-concept is related to higher playfulness ratings in both sense of humour and social spontaneity.

Follow-Up Analyses

Gender and Field Independence-Dependence. The results discussed so far indicate a different relationship between field independence, self-concept and playfulness for preadolescent girls and boys. In order to ascertain more clearly the implications of these different correlational patterns for field independent and dependent girls and boys, the students were divided into two groups on the basis of their field independent-dependent orientation. Students who obtained a GEFT score of less than 9 were classified as Field Dependent (FD) ($n = 27$; 15 girls, 12 boys). Students who obtained a GEFT score of equal to or greater than 9 were classified as

Field Independent (FI) (n = 36; 18 girls, 18 boys). Mean score differences between these groups four groups were evaluated by two (Gender) by two (Field Independence-Dependence) analysis of variance for the SEI scores and PF-NonPF ratings.

The analysis of variance on the SEI total score revealed no significant main effects and a marginally significant ($F(1,59) = 2.92$, $p < .10$) interaction. Examination of the means (see Table 8) indicates that FI girls scored lower (M = 34.78) than both FD girls (M = 38.67) and FI boys (M = 36.28), whereas FD boys scored marginally lower (M = 34.50) than both FI boys and FD girls. Analyses of variance of the four SEI subscales revealed one significant main effect for gender (SEI Peer; $F(1,59) = 4.30$, $p < .05$), one marginally significant main effect for gender (SEI School; $F(1.59) = 2.84$, $p < .10$), and one significant interaction effect (SEI Peer, $F(1,59) = 4.30$, $p < .05$). There were no significant main effects for Field Independence-Dependence.

Examination of the group mean differences among FI/FD girls and FI/FD boys (see Table 8) revealed a pattern of scores consisting of FI girls scoring lower than FD girls in all of the self-concept subscales, whereas FD boys scored lower than FI boys on 3 of the 5 subscales. Subsequently, Tukey's test revealed that FD girls scored significantly ($p < .05$) higher (M = 6.33) on the peer self-concept score than FD boys (M = 4.67), although FI girls and FI boys did not differ. Further inspection of the means indicated that FD girls reported the highest feelings of total self-worth (M = 38.67) whereas both FI girls and FD boys reported the lowest (M =

Table 8

Mean SEI Scores of Field Independent (FI) and Field Dependent (FD) Girls and Boys

	Students			
	Girls		Boys	
Measure	FI (n = 18)	FD (n = 15)	FI (n = 18)	FD (n = 12)
SEI				
PE	5.67	(6.33)	5.67	(4.67)
PR	5.83	5.93	6.36	6.25
SC	5.28	5.80	4.78	4.92
PL	17.89	20.13	19.39	19.42
TOTAL	34.78	38.67	36.28	34.78

Note. Means with brackets differ significantly at $p < .05$. SEI = self-esteem inventory. PE (peer SEI), range = 0 - 8. PR (parent SEI), range = 0 - 8. SC (school SEI), range = 0 - 8. PL (personal SEI), range = 0 - 26. TOTAL (Total SEI score), maximum score = 50.

34.78). Such results partially support the hypothesis that among girls, field independence is negatively associated with self-concept and among boys, field independence would be positively associated with self-concept.

To investigate the possibility that teachers' playfulness rating of their students were dependent upon the students' gender or field independent-dependent status, 2 (Gender) X 2 (Field Independence-Dependence) ANOVAs were calculated for the PF-NonPF total and subscale rating. Analyses of variance of the PF-NonPF total and subscale ratings indicated that no significant main effects and a significant interaction only on the cognitive spontaneity subscale ($F(1,59) = 5.93$, $p < .05$).

Although Tukey's test (see Table 9) revealed only one significant group mean difference ($p < .05$) with FI girls ($M = 5.56$) receiving lower ratings in cognitive spontaneity than FI boys ($M = 6.61$), examination of the playfulness mean ratings revealed similar patterns to those found among the self-concept mean scores. For example Table 9 shows that FI girls received lower ratings than FD girls in all of areas of playfulness, whereas the reverse was found for the boys (i.e., FD boys received lower playfulness ratings than FI boys). Likewise, further inspection of the means revealed that similar to SEI scores, FD girls received the highest total playfulness rating ($M = 34.47$) compared to FI girls and FD boys who received the lowest ratings of 31.28 and 33.33 respectively. Thus, the results of the 2 (Gender) X 2 (Field Independence-Dependence) ANOVAs for effects of gender and field dependence on playfulness ratings thus provide partial support for the hypothesis that among girls, field independence is negatively associated with playfulness, whereas

Table 9

Mean PF-Non PF Ratings of Field Independent (FI) and Field Dependent (FD) Girls and Boys

	Students			
	Girls		Boys	
Measure	FI (n = 18)	FD (n = 15)	FI (n = 18)	FD (n = 12)
PF-NonPF				
PS	6.06	6.60	7.06	6.83
MJ	6.83	7.13	7.22	6.92
SH	6.28	7.00	7.11	6.67
SS	6.44	7.27	6.83	6.67
CS	(5.56)	6.33	(6.61)	6.08
TOTAL	31.28	34.47	34.28	33.33

Note. Means with brackets differ significantly at $p < .05$. PF-NonPF = Playfulness-NonPlayfulness Scale. PS = physical spontaneity. MJ = manifest joy. SH = sense of humour. SS = social spontaneity. CS = cognitive spontaneity. All subscales range = 2 - 10. Total (current teachers' total playfulness ratings), range = 10 - 50.

among boys, field independence is positively associated with playfulness.

Summary

Initial investigation of the data indicated that the current teachers' and previous teachers' playfulness ratings were significantly correlated, allowing the previous teachers' ratings to be eliminated from subsequent analyses. Three by two ANOVAs (School by Gender) revealed no significant school effects for any of the measures and revealed marginal gender effects for peer and school self-concept. Contrary to expectation, independent t-tests failed to reveal significant gender differences between the total scores of field independence (GEFT), self-concept (SEI) and playfulness (PF-NonPF). However, further analyses of the PF-NonPF scale revealed girls were rated marginally lower than boys on the playfulness dimension of cognitive spontaneity. Moreover, item analysis of the PF-NonPF scale revealed teachers were significantly more likely to rate girls as less physically and cognitively spontaneous than boys.

The multidimensionality of both the constructs of self-concept and playfulness were illustrated by correlational patterns existing between the dimensions of each construct. In particular, intercorrelations found between the self-concept subscales scores and the self-concept total score were found to differ in strength for girls and boys. Similar results were obtained between the playfulness subscale ratings and the playfulness total ratings. These results suggest that the inner structures of the self-system and the construct of playfulness may differ for girls and boys.

Contrary to expectation, correlational analyses of the preadolescents' scores as a whole ($N = 63$) failed to indicate significant relationships between field

independence, self-concept and playfulness. However, correlational analyses by gender revealed as expected, that among girls, field independence was negatively associated with both self-concept and playfulness. In contrast, among boys, the hypothesized positive association between field independence and both self-concept and playfulness was only partially supported. A significant positive correlation was found between field independence and self-concept although contrary to expectation, there was no significant relationship found between field independence and playfulness.

Exploratory analyses of the mean score differences between the four groups (FI girls, FD girls, FI boys, FD boys) by means of 2 (Gender) X 2 (Field Independence-Dependence) ANOVAs provided further (although marginal) support for the prediction that specific gender patterns would occur among the variable scores. The emergence of similar patterns for self-concept scores and playfulness ratings illustrated that FI girls and FD boys consistently reported lower feelings of self-worth and were rated as less playful as compared to FD girls and FI boys respectively. These results provide further additional support for the correlational hypotheses that predicted for girls, field independence would be negatively associated with self-concept and playfulness, whereas for boys, field independence would be positively associated with self-concept and playfulness.

CHAPTER V

DISCUSSION

Introduction

The main purpose of this study was to investigate field independence-dependence, self-concept and playfulness in preadolescent girls and boys. A transactional social-cognitive model was used to explain the present study's findings which examined underlying socio-cultural factors including differential gender-role self-perceptions and culturally imposed gender-typed stereotypic roles communicated by both parental and teacher expectancies. In addition, differences between girls and boys in regards to field independence-dependence were examined for both self-concept and playfulness.

The discussion of the results is presented in three sections. The first section discusses whether or not the hypotheses were supported by the findings, the second section offers explanations as to why there was or was not support, and the third section discusses some pedagogical implications of the study.

Support for the Hypotheses

The hypothesis that gender differences would exist among the three total scores of the main variables was not supported. Results from *t*-test analyses indicated that girls and boys did not differ according to mean GEFT scores, total SEI scores or total PF-NonPF (playfulness) ratings. The absence of a significant gender difference for field independence refutes previous findings which have shown that boys achieved higher GEFT scores and were more field-independent than girls (Van Blerkom,

1988). Additionally, the finding that boys did not achieve significantly higher GEFT scores than girls contradicts past research that has claimed boys have a greater spatial-visual ability than girls (Saegert & Hart, 1977) and refutes Witkin's (1950) original theory that field independence is a masculine trait where field dependence is a feminine trait. Moreover, the finding that boys are not more field independent than girls lends support to Hoff Summer's (1993) claim that the stereotype of men excelling in spatial-visual tasks over women is false.

The absence of significant gender differences found on self-concept and playfulness support normative data obtained for Coopersmith's (1967) SEI and Lieberman's (1977a) PF-NonPF scale respectively. Marginal gender differences ($p < .10$) for school self-concept, t (61) = -1.70, and peer self-concept, t (61) = -1.79, are consistent with studies which have found girls to score higher on both academic and social self-concept scores than boys (Byrne & Shavelson, 1988; Harter, 1982). A marginal gender difference was also found for the cognitive spontaneity playfulness subscale, t (61) = -1.79, $p < .10$, with teachers rating girls marginally lower than boys. This finding implies that teachers may perceive girls as less cognitively spontaneous than boys. A closer inspection of the PF-NonPF questionnaire provided additional support for a gender difference hypothesis by indicating significant gender differences for the individual items measuring physical, $t(61) = -2.88$, $p < .01$, and cognitive spontaneity, $t(61) = 3.65$, $p < .001$, with girls receiving significantly lower ratings than boys. These results suggest that teachers rated girls as more serious and conscientious (i.e., less playful), whereas boys were rated as more

mischievous and disruptive (i.e., more playful).

Further gender differences were found in the salience of self-concept constituents (peer, parents, school, personal) and found that the magnitudes of the correlations between the self-concept subscales and the total score differed according to gender. Among girls, parent self-concept ($r = .73$, $p < .01$) ranked higher in the self-concept hierarchy than peers self-concept ($r = .54$, $p < .01$), while school self-concept ranked the lowest ($r = .41$, $p < .05$.) In contrast, among boys, parent self-concept correlated the lowest with the total self-concept score ($r = .39$, $p < .05$).

Combined with the t-test findings, the gender differences found among self-concept intercorrelations support the multidimensional and hierarchical theories of self-concept (Coopersmith, 1967; Marsh, Byrne, & Shavelson, 1988; Oosterwegel & Oppenheimer, 1993) and suggest that self-concept dimensions vary in their position within the self-system (Markus & Nurius, 1986). In addition, results support the claim the gender differences found among self-concept reflect traditional gender-role stereotypes (Dusek & Flaherty, 1981) (i.e., girls are inherently more social and family oriented whereas boys are inherently autonomous and self-reliant).

The hypothesis that significant relationships would be found among field independence-dependence, self-concept and playfulness was not supported, due primarily to the fact that girls and boys differed significantly in terms of correlations among these variables.

The hypothesis that, for girls, field independence would be negatively associated with both self-concept and playfulness was supported by significant

correlations between field independence and self-concept ($r = -.36$, $p < .05$) and field independence and playfulness ($r = -.52$, $p < .05$). As predicted, as girls increased in field independence, they reported lower feelings of total self-worth and received lower playfulness rating from their teachers. This hypothesis was further supported by patterns of means scores obtained by 2 (Gender) X 2 (FI/FD) ANOVAs which revealed that FI girls reported lower feelings of self-worth and were rated less playful than FD girls.

Although unexpected, a significant positive correlation ($r = .38$, $p < .05$) was found between total self-concept and playfulness which indicated that as girls' feelings of self-worth increased, they received higher playfulness ratings from their teachers. This positive correlation between self-concept and playfulness supports past research that has shown a positive self-concept may lead to more playfulness (e.g., Garvey, 1977; Lieberman, 1977a).

The hypothesis that, for boys, field independence would be positively correlated with both self-concept and playfulness was only partially supported. A significant positive correlation ($r = .42$, $p < .05$) was found between field independence and self-concept. This hypothesis was further supported by patterns of means scores obtained by 2 (Gender) X 2 (FI/FD) ANOVAs which revealed that FD boys reported lower feelings of self-worth and were rated as less playful than FI boys. However, field independence did not correlate significantly with playfulness ($r = .03$, $p > .05$), and playfulness did not correlate significantly with self-concept ($r = .09$, $p > .05$).

The indication that more field independent boys had higher self-concepts than more field dependent boys, while more field independent girls had lower self-concepts than more field dependent girls was further supported by the two significant interaction effects on the 2 (Gender) X 2 (FI/FD) ANOVA for both peer self-concept ($\underline{F}(1,59) = 4.30$, $\underline{p} < .05$), with FD girls scoring higher ($\underline{M} = 6.33$) than FD boys ($\underline{M} = 4.67$) and cognitive spontaneity ($\underline{F}(1,59) = 5.93$, $\underline{p} < .05$) with FI boys scoring higher ($\underline{M} = 6.61$) than FI girls ($\underline{M} = 5.56$). As in past literature (e.g., Van Blerkom, 1988), these results suggest that it is the combination or interaction of gender and cognitive style that accounted for the differences found between girls and boys in their peer self-concept and cognitive spontaneity. The finding that both gender and cognitive style maintain a role in playfulness and self-concept suggests that socio-cultural factors need to be investigated to assist in the explanation for these complex interactions between gender and field independence.

Overall, the present findings support the more recent description of the field independence-dependence model (Haakin, 1988; Witkin & Goodenough, 1981), which claims that field independence-dependence consists of a social-relational basis of perception and represents the ability to experience a separate sense of self in relation to others . Contrary to the findings of Witkin and many other researchers (e.g., Coates et al., 1975; Saracho, 1986) that claim field independence is negatively associated with social orientation and playfulness and positively associated with self-concept (e.g., Bhatnager & Rastogi, 1986) across gender, the results of the study suggest that gender and field independence-dependence may interact and thus

differentially influence self-concept and playfulness among girls and boys. Hence, the gender differences and patterns found among field independence-dependence, self-concept and playfulness may be explained according to the transactional model of social-cognitive development (e.g., Coie, 1990; Unger & Crawford, 1992), as detailed below, which claims that differences in gender-related perceptions and behaviours are due to both an increase in societal demands and traditional gender-role expectation in preadolescence and because children interpret seemingly identical messages about gender differently as they approach adolescence.

Meaning of Major Findings

Societal and Self Gender-Role Expectations. The finding that among girls, field independence was negatively associated with self-concept and playfulness may be due in part to the emphasis on cultural gender-role stereotypic behaviour that increases during preadolescence (Unger & Crawford, 1992). Traditional feminine behaviour as reflected by field dependence (i.e., sensitivity, dependence, intuitive thinking) and masculine behaviour as reflected by field independence (i.e., self-reliance, autonomy, analytical thinking) is thus encouraged in girls and boys respectively as communicated by messages from peers, parents and teachers (Coie, 1990). Girls with a field independent orientation may experience an incongruence between their personality construct and traditional gender-role expectations. This realization or belief that they have stereotypical masculine traits may lead to social anxiety (Rosenberg, 1985) and subsequent feelings of low self-worth which may be manifested in a decrease in playfulness. Hence, the degree to which girls and boys

differ in self-concept and playfulness may be dependent upon the complex interactions between their need to conform to social conventions, field independence orientation and gender.

Similarly, the finding that FD girls reported greater feelings of self-worth and were rated more playful may be due to the fact that a field dependent orientation (traditional feminine personality attribute) is more congruent with the traditional female gender-role stereotype. Subsequently, FD girls may not experience the social anxiety associated with the inner struggle of coping with the fact that their inner psychological schemata conflict with society's expectations. Thus, the self-concept belief which partly consists of systems that accrue to gender in the form of stereotypes (Maccoby, 1988) may not be affected. Hence, FD girls are able to maintain or develop a positive sense of self and thus may exhibit more playful behaviours.

An alternative but related explanation as to why FI girls may experience a negative self-concept and appear less playful than FD girls focuses on the importance of self-acceptance (Coopersmith, 1967). During the time of early adolescence, when girls' and boys' gender-role self-perceptions are challenged, it may be that many FI girls realize that their cognitive style is incongruent with society's cultural norms. Subsequently, these girls must decide whether or not to accept this cognitive style as an integral part of their self-system. For example, if a FI girl perceives her cognitive style as masculine, she may decide to reject these qualities and develop a psychological facade based on her willingness to achieve societal acceptance (from

peers, parents, teachers).

Due to the incongruence between self-definition and behaviour, the maintenance of this facade or presenting self (Rosenberg, 1985) may lead to feelings of social anxiety and subsequent low feelings of self-worth, which in turn, may lead to social avoidance and/or negative social experiences. Consequently, this lack of playful behaviour may lead to a negative self-perception of social competence and thus, a self-fulfilling prophesy may be formed, based on the initial rejection of field independence as a feminine personality trait. For example, if a FI girl perceives herself to be socially incompetent due to her lack of femininity or socially desirable traits, she may behave accordingly in a socially incompetent manner (i.e., socially withdraw) which, in turn, will lead to a decrease in play and social interaction, thus confirming the FI girl's initial belief of her unpopularity.

Although results from the present study support the hypothesis that field independence is negatively related to self-concept and playfulness among girls, contradictory research suggests that FI girls such as tomboys (Unger & Crawford, 1992) are more likely to be popular and to have a higher self-concept than girls who conform to gender-stereotypic norms (Schwartz, 1980). Such exceptions to the presented hypothesis may be explained by the fact that FI girls who have both a high sense of self-worth and a playful disposition perceive field independence as an integral part of themselves and thus do not have the desire to conform to socio-cultural norms. Furthermore, the home or school environment may have provided an interpretative framework for these FI girls to accept their field independent orientation as an

inherent part of their personality and not as a feminine or masculine trait. Although these FI girls may be aware that they differ from cultural gender-role expectations, their strong sense of self may help to buffer the possible negative effects of this social incongruence. Alternatively, the ability of some FI girls to remain indifferent to the fact that they do not adhere to gender stereotypes may allow them to develop a strong sense of self-acceptance and subsequent positive self-concept.

Similar to FI girls, results from the present student suggest FD boys may experience an anomaly with respect to their cognitive style being perceived as feminine. Based on evidence of greater stereotyping found among boys (Feinman, 1981) it would be expected that greater differences would have occurred between FI and FD boys than girls, but no significant differences were found to exist between FI and FD boys although marginal differences revealed that FD boys scored lower than FI boys on the majority of the self-concept measures and all of the playfulness measures. Possible explanations for FD boys possessing lower self-concept and to some extent lower playfulness than FI boys parallel those previously discussed for FI girls.

By indicating that girls and boys differ with respect to field independence, self-concept and playfulness, the present study emphasizes the importance of recognizing differentiating tendencies in the social-cognitive development of preadolescent girls and boys which correspond to the structure of the social world without overstating or reifying these tendencies. In particular, the findings that not all preadolescent girls were highly field dependent and that not all preadolescent boys were highly field

independent suggests the significance of social context when examining differences among field independence, self-concept and playfulness. The reverse gender patterns found in the present study thus argue against Witkin's (1950) claim that the field independence-dependence construct is dissociated from social experience and immune to the influence of socio-cultural factors such as gender-role expectations.

Witkin's (1950) proposition that field independence is the higher form of development (indicating higher levels of differentiation between self and environment) fails to consider the ramifications such bi-polar typologies or labels may have for social and emotional properties, particularly when societal gender-role expectations are considered. For instance, in a society that associates and thus values independence and individuality with traditional male gender-role stereotypes, it would be expected that a field dependent orientation would have negative connotations for men, but would have positive connotations for women. In contrast, a field independent orientation would have positive connotations for both women and men. Subsequently, the present study was only able to partially support this claim based on the finding that compared to FD boys, FI boys reported higher feelings of self-worth and higher ratings of playfulness, whereas FI girls (compared to FD girls) reported lower feelings of self-worth and were rated as less playful than FD girls. Such finding suggest that gender-role self-perceptions may play a mediating role in the effect of field independence on self-concept and playfulness.

Peers. As previously mentioned, Carter and McCloskey (1984) claim that after age 10, children show an increased intolerance for peers who violate the norms

for gender and may consequently encourage preadolescents to adhere to social conventions. Traditional feminine and masculine behaviour is thus encouraged among girls and boys respectively, to ensure that peer rejection is avoided (Coie, 1990).

Past literature on field independence and sociometric status may assist in the explanation of why FI girls and FD boys reported lower self-concept (particularly peer self-concept) and received lower ratings of playfulness (particularly cognitive spontaneity) than FD girls and FI boys respectively. The findings from the present study support past research which has found that social popularity and playful behaviour is related to field dependence in girls and field independence in boys (Dreyer, McIntire & Dreyer, 1973; Iscoe & Carden, 1961; Vernon, 1972). Although not addressed explicitly in this study, results suggest that peer self-concept may play a mediating role in the relationships between field independence and playfulness. In other words, higher peer self-concept will lead to greater playfulness. For example, FI girls and FD boys may have been rated as less playful due to low peer self-concept or unpopularity with their peers based on the increased pressure to conform to gender-role stereotypes (e.g., Newson & Newson, 1987). Such results support previous research that has indicated that popular children (irrespective of gender) who possess a high social self-concept are more likely to be rated by their teacher as playful (Rubin, LeMare, & Lollis, 1990).

In an attempt to explain the role of self-perceptions in the complex interactions of gender, field independence, self-concept and playfulness, past research on play and peer relations needs to be examined. Most of the support for the present findings of

FI girls having a less playful disposition and a more negative sense of self than FD girls is found among studies of gifted females. In relation to playfulness, the finding that FI girls were rated as less playful than both FD girls and FI boys supports previous findings on play in preschool children where field independence was negatively associated with sociability, particularly among girls (Coates, 1972; Jennings; 1975, Saracho, 1985). Hence, the present study's findings in regard to preadolescent girls support Witkin and Goodenough's (1977, 1981) contention that FI/FD is related to an impersonal/social orientation respectively.

Related studies on teacher's ratings of gifted girls' behaviour indicate that gifted girls with an analytic, FI orientation were rated as less playful (Solano, 1977) and were more negatively perceived (Connelly, 1977; Welsh, 1977) by their teachers and parents (Loeb & Jay, 1989) than boys or other girls. Although these studies did not systematically examine gender differences with respect to field independence, they provide support for the present study's finding that, for girls, teacher's ratings of playfulness are negatively related to field independence. Related research findings that show FI girls are less popular than FD girls (Iscoe & Carden, 1961; Vernon, 1972) suggest that field independence for some girls may have an inhibiting effect on playfulness behaviour.

A related finding from the present study showed that field independence among girls related the most strongly to a sense of humour ($r = -53$, $p < .01$) which suggests that as girls increased in field independence, they were rated as less likely to exhibit a sense of humour. This finding suggests that teachers were more likely to

perceive FI girls as being serious and unable to laugh at themselves. Thus, combined with the findings that FI girls reported lower feelings of self-worth, such findings support Lieberman's (1977a) contention that an absence of playfulness during early adolescence may be indicative of a sense of inner conflict. Subsequently, a sense of humour may play an instrumental role in assisting preadolescents (particularly FI girls) in maintaining psychological balance and a positive sense of self.

Further support for the present study's findings of FI girls reporting lower feelings of self-worth and playfulness is found among self-concept studies of gifted girls. Based on the evidence provided by two schools of research that has shown FI girls to have more positive self-concepts (Bhatnagar & Rastogi, 1985), a stable consistent sense of self (Schenkel, 1975), higher IQs and a greater incidence of giftedness (Steele, 1989; Van Blerkom, 1988), it would be plausible to expect that FI girls would report greater feelings of self-worth (academic self-concept especially) than FD girls.

However, such findings were contradicted by the reverse patterns occurring in the present study illustrated by the attainment of a significant negative correlation between field independence and school self-concept ($r = -.36$, $p < .05$) and the finding that FI girls reported lower feelings of self-worth relating to school than FD girls. Additional findings on girls further illustrate the anomaly of this complex by indicating that girls experience lower self-confidence and feelings of self-worth irrespective of their academic achievement (Eccles, 1985; Powell & Haden, 1987). Overall, such findings provide support for Reis' (1989) belief that a possible

"perfection complex" exists among high achieving girls who exhibit field independent characteristics.

Alternatively, peer rejection research (e.g., Coie, 1990; Dodge, 1983; Vernon, 1972) combined with Witkin and Goodenough's (1981) theory of field independence-dependence as an aspect of self-other differentiation, suggests an additional explanation for the incidence of lower self-concept and a lack of playfulness among FI girls and FD boys. Witkin and Goodenough's contention that the field independent-dependent dimension represents the social cognitive processes that enable children to experience a separate sense of self in relation to others, which, in turn, is a major determinant of peer status (Coie, 1990), suggests that social cognitions may be a precursor to peer acceptance/rejection and corresponding feelings of high/low self-worth. Although little is known about the social cognitions and subsequent development of social skills among FI individuals, the present finding of low self-concept and playfulness in FI girls can be explained by past research which has found that affect, particularly emotional control, may have an influence on the acquisition of social skills and subsequent social acceptance (Coie, 1990; Wolfgang, 1977). As previously mentioned, both Parker and Asher (1987) and Lieberman (1977) suggest that a playful attitude or one that expresses joyfulness and enjoyment may play a key role in peer status. Thus, children (e.g., FI girls) who appear over-controlled and over-serious (non-playful) may experience limited social acceptance which in turn may lead to feelings of low self-worth.

Relatedly, based on the assumptions mentioned above, due to the lack of

research on social-cognitive development and interpersonal competencies among FI individuals (Witkin & Goodenough, 1981), it may be speculated that FI preadolescent girls may experience lower self-concept and be rated less playful than FI boys due to their failure to generate sufficient emotional excitement to maintain the interest of play partners based on their over-serious, analytical and over-controlled disposition. Thus, the lack of social acceptance may result in a negative self-concept, or, alternatively, the lack of social confidence due to the absence of social skills may result in low feelings of self-worth which may inhibit the FI girl from initiating social relations, resulting in social withdrawal. Indirect support for this explanation is derived from peer relation research that has found social withdrawal (i.e., lack of playful behaviour) to be a characteristic of rejected girls but not of rejected boys (Cantrell & Prinz, 1985), and hence warrants the need for further research of the complex interactions between the constructs of field independence-dependence, self-concept and playfulness among preadolescents.

In contrast to girls, field independence was positively related to self-concept with FI boys rated as more playful (i.e., cognitively spontaneous) than FI girls. According to the gender socialization model, this gender difference between FI girls and FI boys could be due to the fact that field-independent characteristics (i.e., autonomy, self-reliance, analytical thinking) are considered masculine attributes which are more valued in society than field dependent attributes (i.e., dependency, sensitivity, intuitive thinking) (e.g., Tavris, 1992). Consequently, FI boys may develop a positive self-concept which leads to an increase in playfulness. For

example, FI boys may perceive themselves as socially competent based on society's reinforcement of their characteristics and may engage in more social interactions, which in turn may increase their social self-concept.

Findings from the present study revealing that FD boys have lower self-concept than FI girls support the contention that societal norms reflect adherence to male stereotypes (Unger & Crawford, 1992). Past studies have shown that in both the home (Fagot, 1978; McGuire, 1988) and the school environment (Bardewell, Cochran & Walker, 1986; Smetana & Letourneau, 1984), boys receive more pressure than girls to conform to gender-stereotypic demands. Consequently, this greater stereotyping for boys as compared to girls (Feinman, 1981) suggests that FD boys who exhibit traditional feminine characteristics (i.e., sensitivity, nurturance, empathy) may experience greater rejection than FI girls who exhibit traditional masculine behaviours, which in turn may lead to low peer self-concept.

Parent and Teacher Expectations. According to Witkin and Goodenough's (1981) more recent consideration of socio-cultural influences on field independence-dependence, the gender differences found in the correlational patterns between field independence-dependence, self-concept and playfulness can be explained by culturally imposed gender-typed stereotypic roles communicated by both parent and teacher expectancies. Both the home and school environment form the socio-cultural context in which preadolescents define their sense of self. In addition to peer pressure, intensification of gender roles at puberty takes into account social pressures from teachers and parents to conform to gender-appropriate cultural roles.

Past research has demonstrated that children's self-concepts are influenced by both parents (e.g., McGuire, 1988) and teachers (e.g., Bardewell, Cochran, & Walker, 1986; Smetana & Letourneau, 1984). The present study's finding that FI girls and FD boys experienced lower self-concept than FD girls and FI boys may partly be due to parental expectations based on cultural stereotypes which lead to differential treatment of girls and boys and thus reinforce gender-stereotypic behaviour. The present study's demonstration that preadolescent girls and boys may differ in self-concept constituency agrees with developmental theories that claim that preadolescence is a pivotal time in self-concept formation when children experience feelings of self-uncertainty and self-consciousness (e.g. Blos, 1967; Rosenberg, 1985). This uncertainty of the self suggests that the self-concept of preadolescent girls and boys may be vulnerable to cultural gender-role stereotypes imposed by parents.

Parents of FI girls and FD boys may inadvertently have a negative effect on their children's self-concept by reinforcing traditionally gender-appropriate behaviour while discouraging behaviours that contradict traditional gender roles. Past literature claims that parental influences including parenting style (Baumrind, 1967), warmth or emotional receptivity (Brody & Shaffer, 1982) and the quality of the child-parent attachment (Bowlby, 1969; Lieberman, 1977b) are instrumental in the development of self-concept and social acceptance. Accordingly, parents of FI girls and FD boys who exhibit a lack of acceptance or approval of non-traditional gender role behaviour may inhibit their children's ability to acquire self-acceptance and subsequent self-worth.

Furthermore, Coopersmith's (1967) belief that a child's perception of family acceptance plays a crucial role in the development of a positive self-concept and subsequent social acceptance may be used to explain why FI girls and FD boys experience low self-concept and subsequent low playfulness. For example, parents of FI girls and FD boys who have gender-stereotypic role expectations may inadvertently treat girls and boys differently, reinforcing only gender appropriate behaviour (Fagot, 1977). Subsequently, FI girls and FD boys may experience an incongruency with their actual behaviours and dispositions and their parents' gender-stereotypic expectation, which in turn, may lead to low self-concept.

The present study's results suggest that within the social context of the family, FI girls and FD boys may learn specific interaction skills and behaviours that are later transferred to peer interactions, which in turn, may affect their playful disposition. (Lieberman, 1977b). For example, Dreyer and Dreyer's (1973) finding that FI girls engage in less family social interactions (compared to FD girls and FI/FD boys) suggests that due to the lack of parental reinforcement of social skills, FI girls may experience inadequate peer relations which may lead to lower feelings of social self-concept. Alternatively, feelings of lower self-worth (due to parental influence) may result in inadequate or nonexistent peer relations.

The importance of FI girls' self-perceptions in relation to their family is further supported by the present study's findings that parent self-concept plays a significant role in girls' self-concepts during early adolescence. Such results support recent literature that indicates girls' interpersonal self-perceptions have the greatest

effect on their overall feelings of self-worth (CTF, 1991; Edwards, 1993) and suggest that FI girls may be particularly vulnerable to parental messages that encourage traditional feminine behaviour.

In contrast, discrepancies among self-concept components illustrated by the present study suggest that preadolescent boys' self-perceptions as members of their family ranked the lowest within the self-concept hierarchy. The self-concept of FD boys may thus be more influenced by their peers than their family which supports Abram's (1989) claim that by age 11, peers have the greatest effect on children's self-concept and research that shows traditional masculine stereotypes de-emphasize the importance of family among men (Loeb & Jay, 1987). Accordingly, such findings combined with research that shows boys experience a greater social pressure to conform to cultural gender-role stereotypes (e.g., Carter & McCloskey, 1984) help to explain why FD boys experienced lower feelings of self-worth (particularly in relation to peers) in the present study.

Teacher Expectations. The finding that FI girls and FD boys experienced lower self-concept and were rated as less playful than FD girls and FI boys may also be explained in terms of teacher expectancies. Teacher expectancy research has shown that teachers' expectations of their students and subsequent student-teacher interactions have an effect on student behaviour and self-concept (e.g., Brophy, 1983; Dusek & Joseph, 1983; Jones & Gerig, 1994). According to teacher expectancy models (Brophy & Good, 1970; Rosenthal & Jacobson, 1986), teacher expectations evolve through processes that begin with beliefs or ideas about student characteristics

such as femininity amd playfulness, which are communicated both verbally and nonverbally in class to the students. Thus, these teacher expectations form the basis of student-teacher interaction, which, in turn, will affect students' perceptions of personal competence if consistent over time and not resisted by the student. Subsequently, students will internalize these expectations and eventually behave according to what was originally expected by the teacher.

Accordingly, based on the reciprocal nature of the student-teacher relationship (Brophy, 1983), the use of a transactional model to explain the relations between the three main variables indicates that teachers' expectations of students may in part determine their behaviour (Rosenthal & Jacobson, 1968), or alternatively, students' behaviours and self-concept may partly influence teachers' expectations. The finding that teachers rated girls as less cognitively spontaneous than boys, especially FI girls compared to FI boys, provides support for Lieberman's (1977a) contention that teachers (both female and male) may have gender-typed stereotypic beliefs of playfulness and may differentially treat students based on these convictions. For example, if teachers believe field independence to be a masculine trait and field dependence to be a feminine trait, they may treat their students accordingly. For instance, teachers may inadvertently perpetuate traditional gender-role stereotypes by expecting boys to be inherently more adept at spatial-visual tasks than girls and may be more likely to permit boys to behave in more activities that develop spatial-visual skills (i.e., blocks, computer games). Thus, in turn, boys will receive more practice and encouragement to participate in visual tasks than girls who receive the message

that they are unlikely to excel at visual-spatial tasks which may have a negative effect on their self-concept.

The possibility that teachers have the potential to either inhibit or encourage playfulness and self-concept in girls through the use of value-laden labels such as field independence-dependence may consequently lead to the occurrence of self-fulfilling prophecies (Brophy, 1983; Jones & Gerig, 1994; Rosenthal & Jacobson, 1968). For example, if teachers believe that FI girls are autonomous, serious-minded and less playful, they may convey these beliefs through their expectations and treatment of FI girls in the classroom (i.e., delegate more responsibility, express less tolerance for playfulness behaviour, model a non-playful, serious attitude toward teaching/learning). Through constant reinforcement, such classroom experiences may lead students to internalize these expectations and maintain non-playful, field independent characteristics, resulting in the confirmation of the teacher's initial label of seriousness. Hence, the differences found in the present study among girls and boys in relation to field independence, self-concept and playfulness may have been partly influenced by differential teacher expectations.

A related explanation as to why FI girls and FD boys experienced lower peer self-concept and received lower ratings in cognitive spontaneity is offered by Pekrun (1990) who suggests that the influence of teachers and peers has a cumulative effect on a preadolescent's self-concept. The combination of teachers' gender-stereotypic expectations with the social pressure to conform to traditional gender-role stereotypes may lead FI girls and FD boys to experience feelings of low self-worth.

Additionally, teachers' expectations of students' playfulness combined with negative peer relations, may have a negative effect on a child's social self-concept. For instance, a teacher who expects a FI girl to behave seriously, combined with the lack of peer relations, may lead to feelings of low self-worth and result in a less playful disposition.

The present study's findings of a relationship between peer self-concept and total playfulness for both girls ($r = .48$, $p < .05$) and boys ($r = .30$, $p < .10$) suggests that preadolescents' social self-concept influences whether or not their teachers rate them as playful. For instance, if students perceive themselves as socially competent (i.e., reports positive feelings of self-worth concerning peers), they may experience a greater number of social interactions and subsequently receive higher playfulness ratings from the teacher. Moreover, the reverse may occur by students themselves reciprocally influencing teachers' perceptions through their own playfulness behaviour.

Further evidence to support the contention that traditional gender-role stereotypes may affect teacher expectations is derived from the differences in magnitude of the correlations found between the teachers' total playfulness score and the five subscales. It was found that social spontaneity had the greatest influence on teachers' playfulness ratings of girls ($r = .92$, $p < .01$), whereas manifest joy had the greatest influence on teachers' playfulness ratings of boys ($r = .92$, $p < .01$). These results support Lieberman's (1977a) contention that based on gender-stereotypic norms, the construct of playfulness may differ according to gender (i.e., cultural

expectations of playfulness may differ for girls and boys) such that among girls, playfulness is associated with co-operativeness and sociability. In contrast, playfulness is often defined among boys by behaviours of self-expression, spontaneity and boisterous behaviour. Furthermore, Lieberman posits that due to cultural role expectations, teachers assert an increasing influence on the expressive behaviour so that the affect of joy is more accepted as an accompaniment to intellectual achievement in boys and personal relationships in girls. Thus, the various dimensions of playfulness may become differentially valanced for girls and boys and continue to influence the expectations and behaviour of playfulness for both teachers and students.

Alternatively, the dimension of cognitive spontaneity correlated the least with the total playfulness score for both girls ($r = .71$, $p < .01$) and boys ($r = .64$, $p < .01$) suggesting that cognitive spontaneity has the least influence on the teacher's overall rating of the student's playfulness. These findings may suggest that teachers may believe that the cognitive dimension occupies less of a role in the personality construct of playfulness than the affect or social dimensions. Thus, these findings suggest that teachers may perceive playfulness to have a greater influence on emotional development and social competence than on academic achievement.

Compared to the significant correlation found for girls, the unexpected low correlations between field independence-dependence and playfulness found among boys was surprising. Such a finding may be explained by studying similar correlational patterns found in Coates, Lord and Jakabovics (1975) study of field independence and play preferences in preschool girls and boys. Although Coates et

al. found that field independence was negatively associated with play for both girls and boys, the correlations found between field independence and play behaviour among boys were lower than the girls, with the majority nonsignificant, whereas strong negative correlations were obtained for the girls. Thus, similar to Coates et al.'s study, the present findings of nonsignificant relationships between field independence and playfulness among boys suggest that boys' cognitive style may not have as strong an influence on playfulness as compared to girls.

Furthermore, for boys, the positive relationships found in the present study between field independence and self-concept, and peer self-concept and playfulness, suggests that self-concept may mediate the effects of field independence-dependence on playfulness. Thus, teachers ratings of playfulness may be influenced by boys' self-concept as opposed to their field independence-dependence status (i,.e., high self-concept leads to higher playfulness ratings). For example, if a FD boy perceives himself as socially incompetent (i.e., reports low feelings of self-worth concerning peers), he may experience unsatisfactory or less social interactions and subsequently receive lower playfulness ratings from the teacher. Alternatively, an FI boy who has a high peer self-concept may experience frequent social interactions which would result in a high playfulness rating.

Pedagogical Implications

Results from the present study suggest that social cognitions play an integral role in the lives of preadolescents and that emotion cannot be separated from the learning process. The interconnections and complex interactions found between field

independence, self-concept and playfulness demonstrate the need for educators to be aware of underlying factors that may affect the process of learning in the preadolescent. Additionally, the specific gender patterns found among the three primary variables suggest that gender-stereotypic norms may be associated with cognitive style and thus influence cognitive and affective development among preadolescents. Hence, the results of the study suggest that educators need to adapt a holistic educational approach which strives to involve all aspects of child development in the teaching/learning process.

The specific gender patterns found among field independence, self-concept and playfulness suggest that differential patterns of treatment by educators and parents may reinforce biased assumptions about gender-appropriate roles for girls and boys. Although stereotypes may be useful to educators as cognitive frameworks for the organization of person-related information (Unger & Crawford, 1993), they have the potential to produce harmful effects on students who are stereotyped by ignoring their distinctive personal qualities and their positive contributions to others and to society. Moreover, educators need to be aware of the possible implications of labelling students according to gender-typed bi-polar typologies including field independence/dependence and playful/non-playful. For example, the avoidance of such gendered metaphors and the promotion of equality as acceptance via playfulness in a warm and supportive classroom climate can assist educators to minimize the effects of gender-role socialization on preadolescent girls and boys. Hence, educators of preadolescents need to challenge and revise their definitions of femininity and

masculinity and attempt to understand how such gender-typed dichotomies/gendered metaphors may affect preadolescents' self-perceptions and consequently shape their behaviour.

Consequently, in an attempt to understand the preadolescent's perception of gender-typed labels, educators need to provide opportunities for students to challenge potentially damaging gender-role stereotypes. Based on research that has shown how the media influence girls' and boys' self-perceptions (Wilgosh, 1994), multi-media, anti-sexist classroom activities can be incorporated into the school curriculum to assist in the eradication of discriminatory attitudes. For example, students could participate in an analytical exploration of advertisements in popular preadolescent magazines by searching for portrayals of both traditional and modern gender-role stereotypes. Thus, educators need to encourage preadolescents to recognize, analyze and challenge the glorification of gender-role stereotypes found in the media as opposed to passively observing and accepting such destructive messages.

Educators need to recognize their role in assisting preadolescent girls and boys to accept their preferred cognitive styles and personalities as inherent human qualities, rather than perceiving them as feminine or masculine traits. Preadolescents need to be made aware that they are not passive recipients of gender socialization but remain partially responsible for controlling the extent to which culturally mandated gender-based dichotomies (i.e., field independence-dependence) affect their perceptions and behaviours. A warm and supportive socio-emotional classroom environment will promote the case for positive social deviance by encouraging both preadolescent girls

and boys to resist gender-typing by enabling them to feel secure and accepted for who they are as individuals, irrespective of whether or not their behaviour adheres to stereotypic norms. Such activities that encourage preadolescents to resist pressures toward conformity include encouraging girls to participate in traditionally masculine activities (i.e., sports, maths/sciences, computers) and encouraging boys to participate in traditionally feminine activities (i.e., dancing, cooking). In addition, educators must also be willing to respect and accept the preferred cognitive style of their students. The implementation of an accepting and child-centred approach to learning may thus communicate to students a sense of acceptance based on their individuality as opposed to their status within a social category.

Individualism and social independence may also be promoted by the prevalence of playfulness in the classroom which enables the teacher to create a positive and supportive emotional classroom climate. The provision of a warm and accepting learning environment that is characterized by mutual respect and acceptance and incorporates the different dimensions of playfulness may assist in the equitable distribution of emotional expressiveness and power and thus enable girls and boys to feel psychologically safe. Educators of young adolescents need to be aware that preadolescence is a time of transition and increased social pressure and thus must attempt to reduce social anxiety in the classroom by incorporating playfulness into the classroom. In addition to the destruction of gender stereotypes, Norton (1984) claims that such a positive, playful psychological school environment will have a significant effect on social behaviour and academic progress by increasing personal competence

among preadolescents.

Combined with a warm and acceptive socio-emotional classroom climate, holistic, child-centred Junior/Intermediate programs designed from a preadolescent's perspective that incorporate aspects of playfulness through the encouragement of self-expression and self-discovery may lead to self-awareness and eventually self-acceptance. Balanced educational programs that contain instructional games and role-playing activities which involve elements of playfulness such as, spontaneity, humour and joyfulness (Lieberman, 1977a), provide students with the opportunity to develop both cognitive, that is intuitive/analytic, and social/emotional skills. Furthermore, the inclusion of playfulness characteristics in the classroom may foster a sense of control or personal agency in students (Bruner, 1990), and decrease feelings of inhibition which may preclude students from taking risks and enjoying the spontaneous nature of incidental learning. For example, Wasserman (1992) suggests that educators of all grades incorporate aspects of investigative play, which emphasizes active-learning, child-centred activities. Hence, the implementation of such programs within an emotionally secure classroom climate will provide opportunities for students to take risks and self-explore, which in turn may lead to a greater self-understanding (Damon & Hart, 1988).

Implemented within a warm and supportive classroom environment, playfulness in curricula may be used in the Junior/Intermediate grades to ease the difficulty of self-reorganization and to help satisfy the affective, intellectual and social needs of the preadolescent (Hughes, 1991). The present study's finding that the

various self-components varied in importance for girls and boys suggests that educators must recognize the multidimensional and hierarchical nature of the student's self-concept (Byrne & Shavelson, 1986; Marsh, 1989). Educators must realize that students do not possess a unidimensional sense of self and that their self-concepts are based upon many factors. Findings from the present study also indicate that academic or school self-concept does not occupy the highest position in the preadolescent's self-concept hierarchy. Thus, educators may need to focus on other areas of self-concept to motivate students, that is to incorporate more social/emotional aspects into curriculum.

Similarly, the findings of the present study that indicate preadolescent girls and boys may differ according to the centrality of their various self-constituents encourages educators to realize that cognitive competence may have a limited influence on a preadolescent's overall sense of worth, particularly among girls. Such findings provide further support for educational programs to integrate all aspects of development both cognitive and affective, and to include personally relevant material. In addition, educators need to be aware of the various factors that provide sources of esteem for preadolescent girls and boys and subsequently incorporate such areas into the curriculum. For example, educators may develop programs that emphasize the importance of interpersonal relationships and the development of humane characteristics such as patience, sensitivity and empathy which provide the foundation for a positive sense of self.

Related findings derived from the present study demonstrate that teachers'

perceptions of their students' playful behaviour are related to both students' cognitive style and their self-concept and thus suggest that educators must strive to better understand the internal structure of the preadolescent's self-concept. This finding also implies that self-concept, playfulness and cognitive style are integral parts of learning and suggests that playfulness can be used in the classroom to promote a positive self-concept (Crow, 1989) and cognitive development. Additionally, the development of a positive self-concept is a principle underlying learning in the Common Curriculum (1993) and may be implemented through a play-enhanced curriculum within a warm and supportive learning environment. Activities and materials, such as modelling clay, used to promote self-development in the primary grades and various play therapy techniques (Crow, 1989) may be adapted for use at the Junior/Intermediate level. Furthermore, activities that contain all aspects of playfulness (spontaneity, humour and expression of enjoyment) such as role-playing, painting/drawing, and musical activities may be incorporated into all curriculum areas.

In addition, findings from the present study suggest that humour may be used, especially with FI girls, to promote a positive sense of self and to encourage positive peer relations. Students who lack a playful attitude (i.e., appear over-controlled, over-serious, self-conscious) may be at risk for subsequent peer rejection and a corresponding decrease in self-worth (Coie, 1990; Lieberman, 1977b). Thus the integration of playful techniques and humour-filled activities that promote gender-equity through daily jokes/riddles, comical skits, cartoon drawing, etc. into everyday curriculum may help to alleviate stress in the preadolescent classroom and encourage

children to enjoy the learning process.

The therapeutic benefits of play can also be emphasized through the integration of drama and role-playing into the preadolescent classroom. Programs similar to the London-based Pop-Up Theatre (Klein, 1993) which include drama, puppets and role-playing could be used to confront negative issues relevant to preadolescence that contribute to negative feelings and may subsequently decrease feelings of self-worth. Moreover, techniques used during child-centred play therapy based on the theories of Smilansky (1968) and Wolfgang (1977) that claim play assists the development of self-concept and emotional control have also been found to successfully enhance the teacher/student relationship (Landreth, 1993) and to improve self-concept (Crow, 1989) when incorporated into a curriculum unit. Thus, incorporating therapeutic aspects of play into the Junior/Intermediate curriculum may lead to the promotion of a positive sense of self and assist in the development of cognitive abilities.

A holistic, child-centred program that incorporates playful activities in a warm and supportive socio-emotional climate may also encourage preadolescents to take risks by attempting a variety of cognitive styles. Recent research has suggested that cognitive styles may be pliable (Garner & Cole; 1986, Feuerstein, 1979; Haakin, 1988; Letteri, 1981; Van Blerkom, 1988) and thus may empower educators to assist in the development of a student's cognitive style through the use of teaching strategies (analytic/holistic) in particular environments (structured/non-structured). For example, educators may promote cognitive flexibility in a child-centred, playful, activity-based classroom through the use of activities that encourage discovery, risk-

taking and the ability to predict.

Similarly, Haaken's (1988) claim that a field independent style or an extreme field dependent style may be maladaptive suggests that holistic educational programs are needed to provide preadolescents with activities to equally promote both field independent and field dependent styles. Such activities, combined with a positive classroom climate will provide an atmosphere of acceptance and respect and thus encourage students to appreciate and accept their preferred cognitive style. Likewise, the definition of field independence-dependence as a flexible continuum rather than a bi-polar typology may prevent educators from viewing field independence as developmentally superior. The view that cognitive style is a preference as opposed to an ability, empowers preadolescents by enabling them to take control of their learning and may thus prevent the stigma of a particular style from affecting one's self-concept and related behaviour.

The contention that social relations play a critical role in the lives of preadolescent girls suggests that educators need to encourage all students to participate in activities that promote social integration (i.e., co-operative group-work). In addition, curricula models originally created for gifted females (Loeb & Jay, 1987) that consist of activities that discourage rigidity, dichotomous thinking, and over-self-control while encouraging cognitive spontaneity, flexibility and self-expression need to be incorporated into the classroom for everyday use for the benefit of all preadolescent children. For example, activities such as brainstorming and the constant use of brainteasing activities (i.e., what would happen if...) encourage

divergent thinking and both cognitive and social spontaneity. Activities originally developed for gifted students benefit all children by discouraging perfectionism which precludes self-acceptance and thus encourage students to develop realistic self-expectations including cognitive and social coping skills which are necessary for the attainment of a playful attitude and enjoyment of life.

Moreover, educators need to be cognizant of the possible ramifications labelling may have on the social cognitive development of FI girls despite the fact that such labels may be intended to be used in a positive manner (i.e., very conscientious, over-serious, over-competitive). Consequently, all girls need to be encouraged to develop positive affective relationships with both educators and peers through programs such as peer counselling and teacher mentorships with the teacher as the advisor and the student as the advisee (Parish & Parish, 1988). Similarly, counselling or educational programs that develop self-awareness (Hutton et al., 1994) may teach girls how to effectively cope with realities such as anger and success which are needed to achieve a positive sense of self.

In contrast, FD boys need to be encouraged to engage in positive social interactions and develop social skills that may lead to a more positive sense of self and subsequent peer acceptance or vice versa. Educators also need to be aware of the social pressure that preadolescent boys may have to deal with due to socio-cultural norms that de-value FD characteristics among men, such as, sensitivity, sociability and dependence, and thus encourage boys to perceive FD traits in a positive manner, which in turn, may lead to self-acceptance. The combined use of playfulness both in

the classroom and the curriculum may assist preadolescents to maintain the veracity of their own feelings and perceptions, even in the face of contradictory norms. Consequently, both girls and boys will be encouraged to develop real rather than fraudulent relationships with themselves, with others and with the world.

Summary

The present study demonstrates that the constructs of field independence, self-concept and playfulness are interconnected and may interact in different ways for preadolescent girls and boys. The illustration of specific gender patterns found between variables suggests that field independence may interact with socio-cultural factors (i.e., gender-stereotypic norms) and may lead to subsequent differential behaviour between preadolescents in relation to self-concept and playfulness. Thus, the differences found between girls and boys may have been partially due to the differential interpretation of field-independence based on the influence of cultural gender-role expectations.

The finding that teachers' ratings of playfulness in students are related to students' cognitive style and self-concept suggests that educators play a critical role in the development of self-perceptions among preadolescents (including gender-role self-perceptions). Schools mirror cultural stereotypes expressed in teacher expectations and thus provide an interpretive framework for children's beliefs about their abilities. Thus, educators need to be aware that their expectations of students may inadvertently reflect socio-cultural norms and thus influence the ways in which students perceive and interpret information. Moreover, the present study may increase awareness

among educators of the effects of labelling and the use of gendered metaphors (i.e., field independence = masculinity) on a student's sense of self-worth. In addition, the present study demonstrates that FI girls and FD boys may be more susceptible to the influences of gender-role stereotypes and thus may be at risk for developing self-concept disorders and poor peer relations due to the incongruency between their socially-defined behaviour and self-definition.

Furthermore, the present study is particularly relevant to educators of preadolescents by suggesting that both cognitive (field independence/dependence) and affective factors (self-concept and playfulness) have a significant influence on the learning process. The finding that the cognitive style of field independence, self-concept and playfulness are all interrelated emphasizes the importance of a holistic and humanistic educational philosophy that integrates the dimension of playfulness into all aspects of the curriculum. Moreover, by raising educators' awareness of the difficult and paradoxical task of cognitive integration of the self (Erikson, 1951) and social differentiation (Bernstein, 1980; Harter, 1986) faced by preadolescence, this study may encourage educators to create a warm and supportive classroom climate that will provide preadolescents with a sense of psychological security and subsequent freedom that will encourage self-discovery and self-expression. Thus, the present study may inspire educators to design and implement curricula that emphasizes the role of playfulness as a vehicle for cognitive and affective development which may provide students with the opportunity to develop self-awareness and eventually acquire self-acceptance.

CHAPTER VI

CONCLUSION

Limitations

Several limitations of the present study may have prevented the results from demonstrating a stronger relationship between field independence, self-concept and playfulness. In relation to this study's design, the proposed sample is one of convenience which is not truly representative of the general population. Accordingly, the sample may have been biased due to the fact that the subjects were not randomly chosen. Although attempts to alleviate this biased sample were made by purposely selecting schools in locations that were representative of all SES families, some bias may still have existed due to the absence of random selection.

A major conceptual limitation regarding self-concept concerns the possibility that the relationship between self-concept and mental health is not linear (Kohn, 1994). An awareness of the mistakes and limitations of the self is crucial for normal adjustment (Damon & Hart, 1983) and subsequently, an extremely high self-concept score may reflect maladaptive behaviour. Thus, the assumption that a high self-concept score reflects a psychologically well-adjusted person may not always be correct. For example, in a review of peer relations, Hartup (1983) found that children with extremely high and extremely low self-concept scores tended to have friendship difficulties.

Similarly, due to the complex nature of the self-system, the attainment of a true measurement of all self-constituents has yet to be achieved (Hoff-Summers,

1993). Although this study only investigated one dimension of the self-system (self-concept), it was assumed that this dimension of the self represented the total self-structure. Moreover, self-concept instruments do not measure why people dislike or like themselves and thus fail to indicate the reasons underlying the attainment of a low or high score.

In addition, Coopersmith's (1967) SEI fails to provide an accurate measure of how a child feels about her or his physical sense of self. The only question that addresses this issue asks, "Do you think that you are as nice looking as other people?" Based on research that shows physical appearance including body image plays an integral role in a girl's self-concept (Edwards, 1993), the failure to provide a separate subscale for the physical self-concept prevents the SEI from representing how a preadolescent girl truly feels about herself. Accordingly, future studies need to consider the critical role the physical sense of self plays in a preadolescent girl's self-concept through the use of more recent and comprehensive self-concept measures such as The Perceived Competence Scale for Children (Harter, 1982).

SEI scores may have also been hindered by varying reading ability levels among the students which may have affected their comprehension of the questions. Moreover, despite the low scores on the lie scale, the fact that the SEI is a self-report questionnaire presents the problem of social desirability. For example, some students may have completed the SEI according to their perceptions of socially desirable qualities as opposed to reporting their true self-perceptions. Thus, the students' expressed opinion of themselves may not have been related to their inner sense of

self-worth. Such methodological problems might have been eliminated by including more objective measures of self-concept such as behaviourial observations and personality ratings from third party sources (e.g., parents, teachers, etc.).

Further instrumental limitations concern the PF-NonPF scale where the obtained scores represented only the teachers' perceptions of student attitudes and behaviours which may have differed from what occurred in reality. Teachers' personal bias and/or inaccurate memories of their student behaviours may have distorted the data. These problems of subjectivity may be eliminated in future studies through the administration of the PF-NonPF to adults other than teachers (e.g., parents, social workers, principals), and through the inclusion of behaviourial observations of children's playful behaviour/attitudes during recess and physical education classes.

Many teachers noted that the descriptions of the high end of the playful scale (5) were somewhat negative and many teachers found themselves purposely rating the students lower to avoid this negative description. This negative perception of a high playfulness score may have resulted in lower playfulness ratings and thus may have precluded the PF-NonPF from accurately representing the playfulness dimension of the students' personalities. For future use in the study of play, the PF-NonPF needs to provide a larger number of descriptors for the rating scales which may assist teachers in the assessment of their students' playfulness attitudes and behaviours.

Similarly, an instrumental limitation has been found to exist with the GEFT (Van Blerkom, 1988). Whereas this study considered the GEFT score to represent

field independence-dependence, Goodenough, Oltman and Cox (1987) reported that EFT scores are strongly related to spatial abilities and are responsive to training. Thus, perhaps in the present study, the GEFT scores were a measure of spatial ability and not field independence-dependence. Future studies therefore need to include additional measures of field independence-dependence (e.g., Rod and Frame Test, Witkin, 1950) as well as a measure of spatial ability.

Time constraints imposed by the school schedule also proved to be a limitation. The lack of time could have directly affected the GEFT scores since the students were requested to trace as many of the figures as they were capable of doing within the given time limit. Perhaps, as Witkin et al. (1971) suggested, a longer time limit is necessary for students to trace a greater number of figures which would provide a more accurate representation of the students' cognitive style. The short time limit may have caused a reduction in the GEFT scores which may have subsequently indicated a larger number of field-dependent students than there were in reality. Additionally, time constraints may have had an effect on the PF-NonPF scores due to the fact that the teachers may not have had sufficient time to complete the questionnaires. Thus, the scores may have failed to accurately represent the students' playfulness behaviour.

Delimitations

There was no attempt to include the previous teachers rating in the data analyses based on the significant correlations obtained between the current and previous teachers playfulness ratings. A detailed item analysis of the PF-NonPF

questionnaire was not performed because the goal of the present study was to examine the relationships between the three total constructs of field dependence, self-concept, and playfulness as indicated by their total scores. Subsequently, further validation and reliability analyses of the PF-NonPF remains a task for researchers.

There was no attempt made to examine the predictive validity of the GEFT, SEI and PF/NonPF based on the use of a transactional model to explain the results. The present study was based on the hypothesis that field independence, self-concept and playfulness form a complex system of interrelationships that may interact with one other. The assumption that one construct significantly predicts the other was not made for this study due to the belief that the variables are all interdependent and studying the effects of each variable in isolation would appear fruitless.

Suggestions for Future Research

The complex interactions and the lack of consistent findings in the areas of field independence, self-concept and playfulness suggest the need for future research to further examine the psychological world of the preadolescent. Variables such as gender-role self-perceptions, sociometric status, and teacher expectations need to be considered as they may offer further insight into preadolescent social cognitions. Furthermore, the discrepancy between the ideal and real self needs to be looked at, particularly in relation to gifted females. Suggestions for future studies include comparisons of gifted children and non-gifted children with regards to self-perceptions and self-expectations.

In addition, the present study warrants the need for future research by suggesting that social-cultural factors may underly the gender differences found among field independence, self-concept and playfulness. Future research needs to investigate the influence of gender-stereotypic norms on the social cognitions of preadolescents. The impact of gender-role stereotypes may be examined by means of studying gender-role self-perceptions among preadolescents and their relationship to self-concept, playfulness and cognitive style. Furthermore, the suggestion that gender-typed behaviour increases in the company of members of the opposite gender encourages the need for future research to examine differences between students attending same-gender and mixed gender schools.

To further understand the development of gender-role self-perception and how it influences behaviour and attitudes, research needs to focus on play behaviours in young children, particularly gender-typed play preferences. Similarly, the role of attachment to primary caregivers needs to be considered in the development of gender-role self-perceptions and how they influence subsequent behaviours and attitudes. Moreover, longitudinal research is needed in the area of social cognitive development to illustrate a connection between early childhood experiences and subsequent attitudes and behaviours in preadolescents.

Further suggestions for future research include a replication of this study which would also measure the teacher's cognitive style, self-concept and playfulness disposition. Based on the reciprocal nature of the teacher-student relationship, it would be interesting to investigate whether the teacher's cognitive style, self-concept

and playfulness disposition significantly affect the same variables in the students. For example, would a FI woman teacher with a low self-concept and non-playful disposition have a negative effect on self-concept and playfulness in her students, especially if those students are FD? Relatedly, future research could investigate the interaction effect of the teacher's gender and field independent-dependent status on their students' self-concept. For example, would an FD teacher have a negative effect on their FI students, and would the effect differ according to gender?

Concluding Statement

The findings derived from the present study support the transactional model of social development by illustrating that gender-related perceptions (field independence-dependence, self-concept) and behaviours (playfulness-nonplayfulness) may differ during preadolescence both because society's gender-role demands increase during preadolescence and because children interpret seemingly identical messages about gender differently as they approach adolescence. Furthermore, the demonstration of a connection between field independence, self-concept and playfulness emphasizes the importance of the integration of cognitive and affective domains in the education of preadolescents and supports Maslow's (1968) theory that emotion cannot be separated from the learning process (Lakoff, 1987; Nunn & Parish, 1992). Such a relationship thus encourages educators to adapt a more holistic and humanistic educational approach by incorporating playful activities and a playfulness attitude into the curriculum as a vehicle for cognitive and affective development.

The present findings also reiterate the importance of focusing on individual differences in psychological patterns. The increased number of differences found in the present study as the sample was further divided into subgroups illustrates the importance of shifting attention from similarities among members of an age cohort to individual differences. For instance, upon initial inspection of the study's sample, few differences were found but a more detailed analysis provided significant differences in relation to gender, field independence and playfulness. Similarly, analyses of the self-concept and playfulness scale provide further support for focusing on multidimensional constructs. The lack of significant differences found from analyses using only the total score, support recent criticisms of single-factor psychological theories (Damon & Hart, 1988; Kohn, 1994). Hence, such findings stress the need for researchers to examine the various components of complex psychological constructs such as self-concept and playfulness.

Furthermore, the present study's findings that different gender patterns existed in relation to field independence, self-concept and playfulness argue against Witkin's (1950) contention that field independence is a developmentally higher order state and remains unaffected by stereotypic gender-role expectations. This study suggests that students are active agents and may thus contribute to the process and outcome of the act of perceiving. Constructs such as field independence-dependence suggest a pattern that characterizes the organization of perceptual experiences which are based on social relations. Thus Witkin and Goodenough's (1977; 1981) failure to recognize the influence of socially constructed gender roles in the acquisition of field independence

precludes the determination of the social and emotional ramifications of a preferred cognitive style.

The present study emphasizes the critical role educators play in the social-cognitive development of a preadolescent and may assist in developing an awareness among educators of the influence of gender-role appropriate behaviour on students' gender-role self-perceptions. It needs to be reaffirmed that educators need to be cognizant that preadolescence is a time of increased social consciousness and pressure to conform to gender-stereotypic norms. Thus, the use of gendered metaphors or value laden terms such as field independent/dependent or playful/nonplayful may have an influence on how preadolescents perceive themselves in relation to their gender roles.

The realization that students' behaviours cannot be separated from the larger social context, combined with the redefinition of gender-stereotypic norms, may assist educators in promoting a positive sense of self and a playful disposition among preadolescents. Once educators become aware that they have differential gender-role expectations for students and their attempt to understand the formation and perpetuation of these beliefs within the classroom, they can begin to strive to minimize the extent to which these expectations may influence preadolescent self-perceptions. Thus, the inclusion of a playful attitude within the classroom, combined with a warm and accepting environment that promotes psychological flexibility and spontaneity, may promote the development of self-acceptance among preadolescents

which, in turn, may buffer the deleterious effects of negative gender-role stereotypes on psychological adjustment.

REFERENCES

Abrams, C. (1989). Differential association: Social developments in gender identity and intergroup relations during adolescence. In S. Skevington & D. Baker (Eds.), The social identity of women (pp. 59-83). London, UK: Sage Publications.

Abrams, D., Sparkes, K., & Hogg, M. (1985). Gender salience and social identity: The impact of sex of siblings on educational and occupation aspirations. British Journal of Educational Psychology, 55, 224-232.

Amsterdam, B. (1972). Mirror self-image reactions before age two. Developmental Psychology, 5, 297-305.

Anyon, J. (1985). Schools for boys?. London, UK: Hutchinson.

Asher, S., Hymel, S., & Renshaw, P. (1984). Loneliness in children. Child Development, 55, 1456-1464.

Asher, S., & Williams, G. (1987). Helping children without friends in home and school contexts. In Children's social development: Information for teachers and parents (pp. 1-26). Urbana, IL: ERIC Clearinghouse on Elementary and Early Childhood Education.

Bandura, A. (1977). Social learning theory. Englewood Cliffs, NJ: Prentice Hall.

Baraga, E. (1977). The relationship of social and maturational variables to development of field-dependence in preschoolers: A longitudinal study (Doctoral dissertation, University of North Dakota, 1978). Dissertation.

Abstracts International, 39, 351B-352B. (University Microfilms No. 78-10313).

Bardwell, J., Cochran, S., & Walker, S. (1986). Relationship of parental education, race, and gender to sex-role stereotyping in five-year-old kindergartners. Sex Roles, 15, 275-281.

Battle, J. (1991). Self-esteem research: A summary of relevant findings. Edmonton, AB.: James Battle & Associates.

Baumrind, D. (1967). Child care practices anteceding three patterns of preschool behaviour. Genetic Psychology Monographs, 25, 43-88.

Bell, S. (1970). The development of the concept of the object as related to infant-mother attachment. Child Development, 41, 291-311.

Bernstein, R. (1980). The development of the self-system during adolescence. Journal of Genetic Psychology, 136, 231-245.

Bhatnager, P., & Rastogi, M. (1985). Cognitive style and basic-ideal disparity. Psychological Research Journal, 9, 40-45.

Bhatnager, P., & Rastogi, M. (1986). Cognitive style and basic ideal disparity in males and females. Indian Journal of Current Psychological Research, 1, 36-40.

Blackstone, T. (1976). The education of girls today. In J. Mitchell & A. Oakley (Eds.), The rights and wrongs of women (pp. 65-82). Harmondsworth, UK: Penguin.

Blanck, J., & Blanck, R. (1979). Ego psychology II: Psychoanalytic

developmental psychology. New York: Columbia University Press.

Blos, P. (1967). The second individuation process of adolescence. The Psychoanalytic Study of the Child, 22, 162-186.

Boivin, M., Thomassin, L., & Alain, M. (1988, July). Peer rejection and self-perceptions among early elementary school children: Aggressive rejectees vs. withdrawn rejectees. Paper presented at the NATO Advanced Study Institute: Social Competence in Developmental Perspective, Savoie, France.

Bowlby, J. (1958). The nature of the child's tie to his mother. International Journal of Psychoanalysis, 35, 350-373.

Bowlby, J. (1969). Attachment and loss: Vol I. Attachment. New York: Basic.

Breckler, S., & Greenwald, A. (1982, August). Individual differences in the processing of information about oneself. Paper presented at the 90th Annual Convention of the American Psychological Association, Washington, DC.

Brennan, A. (1985). Participation and self-esteem: A test of six alternative explanations. Adolescence, 78, 444-466.

Broderick, C. (1966). Socio-sexual development in a suburban community. Journal of Sex Research, 2, 1-24.

Brody, G., & Shaffer, D. (1982). Contributions of pparents and peers to children's moral socialization. Development Review, 2, 31-75.

Brophy, J. (1983). Research on the self-fulfilling prophecy and teacher expectations. Journal of Educational Psychology, 75, 631-661.

Brophy, J., & Good, T. (1970). Teachers' communication of differential expectations for children's classroom performance: Some behavioural data. Journal of Educational Psychology, 61, 365-374.

Broughton, J. (1980). The divided self in adolescence. Human Development, 24, 13-32.

Brownfain, J. (1952). Stability of the self-concept as a dimension of personality. Journal of Abnormal and Social Psychology, 47, 597-606.

Bruce, P. (1958). Relationship of self-acceptance to other variables with sixth grade children oriented in self-understanding. Journal of Educational Psychology, 49, 229-237.

Bruner, J. (1960). The process of education. New York: Random House.

Bruner, J. (1972). The nature and uses of immaturity. American Psychologist, 27, 687-708.

Bruner, J. (1990). Acts of meaning. Cambridge, MA.: Harvard University Press. Bryant, B. (1985). The neighborhood walk: Sources of support in middle childhood. Monographs of the Society for Research in Child Development, 50, 1985.

Byrne, B. (1984). The general/academic self-concept nomological network: A review of construct validation research. Review of Educational

Research, 54, 427-456.

Byrne, B., & Shavelson, R. (1986). On the structure of the adolescent self-concept. Journal of Educational Psychology, 78, 474-481.

Callahan, C. (1980). The gifted girl: An anomaly? Roeper Review, 2(3), 16-20. Campbell, C. (1993). Play, the fabric of elementary couseling programs. Elementary School Guidance and Counseling, 28, 10-16.

Campbell, J. (1990). Self-esteem and clarity of the self-concept. Journal of Personality and Social Psychology, 59, 538-549.

Campbell, S., & Douglas, V. (1972). Cognitive styles and responses to the threat of frustration. Canadian Journal of Behaviourial Science, 4, 30-42.

Canadian Teachers' Federation (1991). A cappella: A report on the realities, concerns expectations and barriers experienced by adolescent women in Canada. Ottawa, ON: CTF.

Cantrell, V., & Prinz, R. (1985). Multiple perspectives of rejected, neglected, and accepted children: Relation between sociometric status and behavioral characteristics. Journal of Consulting and Clinical Psychology, 53, 854-859.

Caplin, M. (1969). The relationship between self-concept and academic achievement. Journal of Experimental Education, 37, 13-16.

Carter, D., & McCloskey. (1984). Peers and the maintenance of sex-typed behaviour: The development of children's conceptions of cross-gender behaviour in their peers. Social Cognition, 2, 294-314.

Chang, W. (1984, August). An experimental study of self-concept and cognitive style as indicators of psychological differentiation. Paper presented at the International Conference on Thinking, Cambridge, MA.

Charlesworth, W., & Dzur, C. (1987). Gender comparisons of preschooler's behaviour and resource utilization in group problem-solving. Child Development, 58, 191-200.

Chernin, K. (1985). The hungry self: Women, eating and identity. New York, NY: Harper & Row.

Coates, S. (1972). Preschool embedded figures test. Palo Alto, CA: Consulting Psychologists Press.

Coates, S., Lord, M., & Jakabovics, E. (1975). Field dependence-independence, social non-social play and sex differences in preschool children. Perceptual and Motor Skills, 47, 203-208.

Coie, J. (1990). Toward a theory of peer rejection. In S. Asher & J. Coie (Eds.), Peer rejection in childhood (pp. 365-401). Cambridge, MA: Cambridge University Press.

Coleman, J. (1974). Relationships in adolescence. London, UK: Routledge & Kegan Paul.

Coleman, J. (1980). The nature of adolescence. London, UK: Methuen.

Connelly, M. (1977). Gifted girls and gifted women. Roeper City and County School Quarterly, 12, 12-13.

Coopersmith, S. (1959). A method for determining types of self-esteem.

Journal of Abnormal and Social Psychology, 59, 87-94.

Coopersmith, S. (1967). The antecedents of self-esteem. San Francisco: W.H. Freeman and Co.

Corah, N. (1965). Differentiation in children and their parents. Journal of Personality, 33, 300-308.

Crockett, L., & Peterson, A. (1987). Pubertal status and psychosocial development: Findings from the early adolescent study. In R. Lerner & T. Foch (Eds.), Biological-psychosocial interactions in early adolescence. (pp. 173-188). Hillsdale, NJ: Erlbaum.

Crow, J. (1989). Play therapy with low achievers in reality. Unpublished doctoral dissertation, University of North Texas, Denton.

Csikszentmihalyi, M. (1975). Beyond boredom and anxiety. San Francisco: Jossey-Bass.

Czikszentmihalyi, M. (1979). Some paradoxes in the definition of play. In A. Cheska (Ed.), 1979 Proceedings of The Association for The Anthropological Study of Play (pp. 14-26). West Point, NY: Leisure Press.

Cowen, E., Pederson, A., Babigian, H. Izzo, L., & Trost, M. (1973). Long-term follow-up of early detected vulnerable children. Journal of Consulting and Clinical Psychology, 41, 438-446.

Daley, S. (1991, January 9). Girls' self-esteem is lost on way to adolescence, new study finds. The New York Times, pp. B1,B6.

Damon, W. (1977). The social world of the child. San Francisco, CA: Jossey-Bass.

Damon, W, & Hart, D. (1988). Self-understanding in childhood and adolescence. Cambridge, MA.: Cambridge University Press.

Dansky, J. (1980). Cognitive consequences of sociodramatic play and exploration training for economically disadvantaged preschoolers. Journal of Child Psychology and Psychiatry, 20, 47-58.

Dansky, J., & Silverman, I. (1973). Effects of play on associative fluency in preschool-aged children. Developmental Psychology, 9, 38-43.

Dansky, J., & Silverman, I. (1975). Play: A general facilitator of associative fluency. Developmental Psychology, 11, 104.

Denmark, F., Russo, N., Frieze, I., & Sechzer, J. (1988). Guidelines for avoiding sexism in psychological research: A report of the ad hoc committee on nonsexist research. American Psychologist, 43, 582-585.

Dewey, J. (1933). How we think (2nd ed.). Boston: Heath.

Dodge, K. (1983). Behavioral antecedents of peer social status. Child Development, 54, 1386-1399.

Dodge, K. (1986). A social information processing model of social competence in children. In M. Perlmutter (Ed.), Minnesota symposia on child psychology (Vol. 18, pp. 75-127). Hillsdale, NJ: Erlbaum.

Dodge, K., & Feldman, E. (1990). Issues in social cognition and sociometric status. In S. Asher & J. Coie (Eds.), Peer rejection in childhood

(pp. 119-155). Cambridge, MA: Cambridge University Press.

Dodge, K., Murphy, R., & Buchsbaum, K. (1984). The assessment of intention-cue detection skills in children: Implications for developmental psychopathology. Child Development, 55, 163-173.

Dreyer, A., & Dreyer, C. (1973, March). Family interaction and cognitive style: Power around the dinner table. Paper presented at the biennial meeting of the Society for Research in Child Development, Philedelphia, PA.

Dreyer, A., McIntire, W., & Dreyer, C. (1973). Sociometric status and cognitive style in kindergarten children. Perceptual and Motor Skills, 37, 407-412.

Durkin, K. (1985). Television, sex roles and children. Milton Keynes, UK: Open University Press.

Dusek, J., & Flaherty, J. (1981). The development of self-concept during adolescent years. Monographs of the Society for Research in Child Development, 46, (4, Serial No. 191).

Dusek, J., & Joseph, G. (1983). The bases of teacher expectancies: A meta-analysis. Journal of Educational Psychology, 75, 327-346.

Eagle, M., Goldberger, L., & Breitman, M. (1969). Field dependence and memory for social vs. neutral and relevant vs. irrelevant incidental stimuli. Perceptual and Motor Skills, 29, 903-910.

Eccles, J. (1985). Sex differences in achievement patterns. In R.

Dienstbeir & T. Sonderegger (eds.), Nebraska Symposium on Motivation (pp. 97-132). Lincoln, NE: University of Nebraska Press.

Edwards, P. (1993). The A cappella papers: Self-esteem and adolescent women. Ottawa, ON: Canadian Teachers' Federation.

Elder, G., Nguyen, T., & Caspi, A. (1985). Linking family hardship to children's lives. Child Development, 56, 361-375.

Elkind, D. (1981). The hurried child: Growing up too fast too soon. Menlo Park, CA: Addison-Wesley.

Elliott, G. (1984). Dimensions of the self-concept: A source of further distinctions in the nature of self-consciousness. Journal of Youth and Adolescence, 13, 285-307.

Ellis, M. (1973). Why people play. Englewood Cliffs, NJ: Prentice-Hall.

Emmerich, W. (1964). Continuity and stability in early social development. Child Development, 35, 311-332.

Epstein, S. (1973). The self-concept revisited or a theory of a theory. American Psychologist, 28, 405-416.

Erikson, E. (1951). Childhood and society. New York: W.W. Norton and Company.

Erikson, E. (1968). Identity: Youth and crisis. New York: Norton.

Fagot, B. (1978). The influence of sex of child on parental reaction to toddler children. Child Development, 49, 459-465.

Feinman, S. (1981). Why is cross-sex-role behaviour more approved for

girls than boys? A status characteristic approach. Sex Roles, 7, 289-305.

Feiring, C., & Lewis, M. (1987). The child's social network: Sex differences from three to six years. Sex Roles, 17, 621-636.

Feldman, N., & Ruble, D. (1988). The effect of personal relevance on psychological inference: A developmental analysis. Child Development, 59, 1339-1352.

Fennema, E. (1980, January). Success in maths. Paper presented at Sex Differentiation and Schooling Conference, Cambridge, UK.

Feuerenstein, R. (1979). The dynamic assessment of retarded performances. Baltimore, MD: University of Park Press.

Finn, M. (1985). Being disliked: Self-report and social status. Unpublished doctoral dissertation, Duke University, Durham, NC.

Fischer, K. (1980). A theory of cognitive development: The control and construction of hierarchies of skill. Psychological Review, 87, 477-531.

Fitzpatrick, J. (1978). Academic underachievement, other directions and attitudes toward women's roles in bright adolescent females. Journal of Educational Psychology, 70, 645-650.

Fivush, R. (1989). Exploring sex differences in the emotional content of mother-child conversations about the past. Sex Roles, 20, 675-691.

Fox, L. (1981). Instruction for the gifted: Some promising practices. Journal for the Education of the Gifted, 4(3), 246-254.

Frueh, T., & McGhee, P. (1975). Traditional sex-role development and the

amount of time spent watching television. Developmental Psychology, 11, 109.

Garner, C. (1986, December). Cognitive development and teaching vocational students. Paper presented at the Annual Meeting of the American Vocational Association, Chicago, IL.

Garner, C., & Cole, E. (1986). The achievement of students in low SES settings: An investigation of the relationship between locus of control and field dependence. Urban Education, 21, 189-206.

Garvey, C. (1977). Play. Cambridge, MA: Harvard University Press.

Gellert, E. (1975). Children's constructions of their self-images. Perceptual and Motor Skills, 40, 307-324.

Gilligan, C. (1991). Women's psychological development: Implications for psychotherapy. In C. Gilligan, A. Rogers & D. Tolman (Eds.), Women, girls & psychotherapy: Reframing resistance (pp. 5-31). New York: Harrington Park Press.

Goldstein, K., & Blackman, S. (1978). Cognitive style: Five approaches and relevant research. New York: John Wiley & Sons.

Goodenough, D. & Eagle, C. (1963). A modification of the embedded figures test for use with young children. The Journal of Genetic Psychology, 103, 67-74.

Goodenough, D., Oltman, P., & Cox, P. (1987). The nature of individual differences in field dependence. Journal of Research in Personality, 21,

81-99.

Goswick, R., & Jones, W. (1982). Components of loneliness during adolescence. Journal of Youth and Adolescence, 11, 373-383.

Greenwood, C., Todd, N., Hops, H., & Walker, H. (1982). Behavior change targets in the assessment and treatment of socially withdrawn preschool children. Behavioral Assessment, 4, 273-247.

Guyot, G., Fairchild, L., & Hill, M. (1980). Physical fitness and embedded figures test performance of elementary school children. Perceptual and Motor Skills, 50, 411-414.

Haaken, J. (1986). Field dependence research: A historical analysis of a psychological construct. Signs: Journal of Women in Culture and Society, 13, 311-330.

Harter, S. (1982). The perceived competence scale for children. Child Development, 53, 87-97.

Harter, S. (1986). Cognitive-developmental processes in the integration of concepts about emotion and the self. Social Cognition, 4, 119-151.

Hartup, W. (1983). The peer system. In E. Hetherington (Ed.), Handbook of child psychology: Socialization, personality and social development (pp. 103-196, 4th ed.). New York: Wiley.

Haugh, S., Hoffman, C., & Cowan, G. (1980). The eye of the very young beholder: Sex-typing of infants by young children. Child Development, 51., 598-600.

Heiss, J. (1981). The social psychology of interaction. Englewood-Cliffs, NJ: Prentice-Hall.

Hendry, L. (1983). Growing up and going out: Adolescents and leisure. Aberdeen, UK: Aberdeen University Press.

Herrmann, D., Crawford, M., & Holdsworth, M. (in press). Gender-linked differences in everyday memory performance. British Journal of Psychology.

Higgins, E. (1990). Self-state representations: Patterns of interconnected beliefs with specific holistic meanings and importance. Bulletin of the Psychonomic Society, 28, 248-253.

Horney, K. (1950). Neurosis and human growth. New York: Norton.

Hoff Sommers, C. (1994). Who stole feminism? New York: Simon & Schuster.

Hughes, F. (1991). Children, play and development. Toronto, ON: Allyn and Bacon.

Huizinga, J. (1950). A study of the play element in culture. Boston, MA: Beacon.

Hutton, S., Gougeon, T., Mahon, B., & Robertson, L. (1994, June). Enabling visions: Self-esteem of junior high girls II. Paper presented at Convention 1994 of the Canadian Society for Women in Education, Calgary.

Hyde, J. (1981). How large are cognitive gender differences? American

Psychologist, 36, 892-910.

Hymel, S. (1983, April). Social isolation and rejection in children: The child's perspective. Paper presented at the biennial meeting of the Society for Research in Child Development, Detroit, MI.

Iscoe, I., & Carden, J. (1961). Field dependence, manifest anxiety and sociometric status in preschool children. Journal of Consulting Psychology, 25, 184.

Jain, N., Bhatnager, P., & Rastogi, M. (1988). Effect of age, sex and cognitive style on self consistency. Indian Journal of Current Psychological Research, 3, 34-38.

Jennings, K. (1975). People versus object orientation, social behavior, and intellectual abilities in preschool children. Developmental Psychology, 11, 511-519.

Johnson, J., Christie, J., & Yawkey, C. (1987). Play and early childhood development. Glenview, IL: Scott, Foresman and Company.

Johnson, J., Ershler, J., & Lawton, J. (1982). Intellective correlates of preschoolers' spontaneous play. Journal of General Psychology, 106, 115-122.

Jones, W. (1981). Loneliness and social contact. Journal of Social Psychology, 113, 295-296.

Jones, M., & Gerig, T. (1994). Silent sixth-grade students: Characteristics, achievement and teacher expectations. The Elementary

School Journal, 2, 169-182.

Kagan, J. (1982). Psychological research on the human infant: An evaluative summary. New York: W. T. Grant.

Kandal, D., & Davies, M. (1982). Epidemiology of depressive mood in adolescents. Archives of General Psychiatry, 39, 1205-1212.

Karp, S., Silberman, L., & Winters, S. (1969) Psychological differentiation and socioeconomic status. Perceptual and Motor Skills, 28, 55-60.

Katz, P. (1979). The development of female identity. Sex Roles, 5, 155-178.

Katz, P., & Boswell, S. (1986). Flexibility and traditionality in children's gender roles. Genetic, Social, and General Psychology Monographs, 112, 103-147.

Keigh, B., & Donlon, G.(1972). Field dependence, impulsivity and learning disabilities. Journal of Learning Disabilities, 5, 331-336.

Klein, R. (1993, September 10). In search of the super-ego. The Times Educational Supplement, p. 26.

Kohn, A. (1994, December). The truth about self-esteem. Phi Delta Kappan, pp. 272-283.

Kuhn, D., Nash, S., & Brucken, L. (1978). Sex-role concepts of two- and three-year-olds. Child Development, 49, 445-451.

Kurdek, L., & Krile, D. (1982). A developmental analysis of the relation between peer acceptance and both interpersonal understanding and

perceived social self-competence. Child Development, 53, 1485-1491.

Kwiatowska, A. (1990). Sense of personal continuity and distinctness from others in childhood. In L. Oppenheimer (Ed.), The self-concept: European perspectives on its development, aspects, and applications (pp. 63-74). Berlin: Springer.

Ladd, G. (1990). Having friends, keeping friends, making friends, and being disliked by peers in the classroom: predictors of children's early school adjustment? Child Development, 61, 1081-1100.

Lakoff, G. (1987). Women, fire and dangerous things. Chicago, IL: The University of Chicago Press.

Lerner, R., & Tubman, J. (1989). Conceptual issues in studying continuity and discontinuity in personality development across life. Journal of personality, 57, 343-373.

Letteri, C. (1980). Cognitive profile: Basic determinant of academic achievement. Journal of Education Research, 73(4), 195-198.

Lieberman, N. (1977a). Playfulness: Its relationship to imagination and creativity. New York: Penguin.

Lieberman, N. (1977b). Preschoolers' competence with a peer: Relations with attachment and peer experience. Child Development, 48, 1277-1287.

Linton, H. (1955). Dependence on external influence: Correlates in perception, attitudes and judgement. Journal of Abnormal and

Social Psychology, 51, 502-507.

Lipsitt, L. (1958). A self-concept scale for children and its relationship to the children's form of the manifest anxiety scale. Child Development, 29, 463-471.

Loeb, R., & Jay, G. (1987). Self-concept in gifted children: Differential impact in boys and girls. Gifted Child Quarterly, 31, 9-14.

Lynn, D. (1969). Parental and sex-role identification: A theoretical formulation. Berkeley, CA: McCutchan.

Maccoby, E. (1988). Gender as a social category. Developmental Psychology, 24, 755-765.

MacKinnon, C., Brody, G., & Stoneman, Z. (1982). The effects of divorce and maternal employment on the home environments of preschool children. Child Development, 53, 1392-1399.

Mahler, M. (1963). Thoughts about development and individuation. The Psychoanalytic Study of the Child, 18, 307-324.

Mahler, M., Pine, F., & Bergman, A. (1975). The psychological birth of the human infant. New York: Basic Books.

Mahoney, P. (1985). Schools for boys? London, UK: Hutchinson.

Markus, H., & Nurius, P. (1986). Possible selves. American Psychologist, 41, 954-968.

Markus, H., & Wurf, E. (1987). The dynamic self-concept: A social psychological perspective. Annual Review of Psychology, 38, 299-337.

Marsh, H. (1984). Relations among dimensions of self-attributions, dimensions of self-concept and academic achievement. Journal of Educational Psychology, 76, 1291-1308.

Marsh, H. (1986). Verbal and math self-concepts: An internal/external frame of reference model. American Educational Research Journal, 23, 129-129.

Marsh, H. (1989). Age and sex effects in multiple dimensions of self-concept: Preadolescence to early adulthood. Journal of Educational Psychology, 81, 417-430.

Marsh, H., Byrne, B., & Shavelson, R. (1988). A multifaceted academic self-concept: Its hierarchical structure and its relation to academic achievement. Journal of Educational Psychology, 80, 366-380.

Marsh, H., Parker, J., & Barnes, J. (1985). Multidimensional adolescent self-concepts: Their relationship to age, sex, and academic measures. American Educational Research Journal, 22, 422-444.

Marshall, H. (1989). The development of self-concept. Young Children, 44(5), 44-51.

Martin, M. (1991). Learning styles, cognitive styles, teaching styles and brain hemisphericity. In R. Short, L. Stewin & S. McCann (Eds.), Educational psychology: Canadian perspectives (pp. 42-59). Toronto, ON: Copp Clark Pitman.

Maslow, A. (1968). Music education and peak experience. Music

Educators Journal, 72, 163-171

Matthews, W. (1977). Modes of transformation in the initiation of fantasy play. Developmental Psychology, 12, 21-236.

McGuire, J. (1988). Gender stereotypes of parents with two-year-olds and beliefs about gender differences in behaviour. Sex Roles, 19, 233-240.

McGuire, W., & McGuire, C. (1982). Significant others in self-space: Sex differences and developmental trends in the social self. In J. Suls (ed.), Psychological perspectives on self (pp. 42-65). New York: Erlbaum.

McGuire, W., & McGuire, C. (1988). Content and process in the experience of self. In L. Berkowitz (Ed.), Advances in experimental social psychology (Vol. 21, pp. 97-144). New York: Academic Press.

McGuire, W., & Padawer-Singer, A. (1976). Trait salience in the spontaneous self-concept. Journal of Personality and Social Psychology, 33, 743-754.

Mead, G. (1956). The social psychology of George Herbert Mead. Chicago, IL: University of Chicago Press.

Messick, S. (1976). Individuality in learning. San Francisco, CA: Jossey-Bass.

Miller, S. (1973). Ends, means and galumphing: Some leitmotifs of play. American Anthropologist, 75(1), 87-98.

Nash, S. (1975). The relationship among sex-role stereotyping, sex-role preference and the sex difference in spatial visualization. Sex Roles, 1, 15-32.

Newcombe, N., Bandura, M., & Taylor, D. (1983). Sex differences in spatial ability and spatial activities. Sex Roles, 9, 377-386.

Newson, J., & Newson, E. (1987). Family and sex roles in middle childhood. In D. Hargreaves & A. Coelly (Eds.), The psychology of sex roles (pp. 142-158). New York: Hemisphere.

Norton, M. (1984). What's so important about school climate? Contemporary Education, 56(1), 43-45.

Nunn, G., & Parish, T. (1992). The psychosocial characteristics of at-risk high school students. Adolescence, 27, 435-440.

Offer, D., & Howard, K. (1972). An empirical analysis of the Offer Self-Image Questionnaire for adolescents. Archives of General Psychiatry, 27, 529-537.

Offer, D., & Offer, J. (1975). From teenage to young manhood: A psychological study. New York: Basic Books.

Offer, D., Howard, K., & Ostrov, E. (1986). Loneliness, shyness and withdrawal in adolescence. In R. Feldman & A. Stiffman (Eds.), Mental health disorders in adolescence: Part B. Vol. 1. Advances in adolescent mental health (pp. 29-58). London, UK: JAI Press Inc.

Olesker, W. (1978). Cognition and separation-individuation process: A study of three boys at nursery school. Psychoanalysis and Contemporary Thought, 1, 237-268.

Oltman, P., Raskin, E., & Witkin, H. (1971). The Group Embedded Figures

Test (GEFT). Palo Alto, CA: Consulting Psychologists Press.

Oltman, P., Goodenough, D., Witkin, H., Freedman, N., & Friedman, F. (1975). Psychological differentiation as a factor in conflict resolution. Journal of Personality and Social Psychology, 32, 730-736.

Ontario Ministry of Education and Training (1993). Common curriculum. Toronto, ON: Ministry of Education.

Ontario Ministry of Education and Training (1994). Engendering equity: Transforming Curriculum. Unpublished draft.

Oosterwegel, A. & Oppenheimer, L. (1993). The self-system: Developmental changes between and within self-concepts. Hillsdale, NJ: Erlbaum.

Orbach, S. (1986). Hunger strike: The anorectic's struggle as a metaphor for outrage. London, UK: Faber & Faber.

Ornstein, R., & Sobel, D. (1987). The healing brain. New York: Simon & Schuster.

Ostrov, E. (1974). Patterns of cognitive control functioning in a group of adolescent delinquents. Unpublished doctoral dissertation, University of Chicago, Chicago.

Ostrov, E., & Offer, D. (1978). Loneliness and the adolescent. Adolescent Psychiatry, 6, 34-50.

Pargman, D., Bender, P., & Deshaies, P. (1975). Correlation between visual disembedding and basketball shooting by male and female varsity

college athletes. Perceptual and Motor Skills, 41, 956.

Parish, J., & Parish, T. (1988). Some thoughts on motivating students. Education, 110, 199-201.

Parker, J., & Asher, S. (1987). Peer relationas and later personal adjustment: Are low-accepted children at risk? Psychological Bulletin, 102, 357-389.

Parkhurst, J., & Asher, S. (1987, April). The social concerns of aggressive-rejected children. In J. Coie (Chair), Types of aggression and peer status: The social functions and consequences of children's aggression. Symposium conducted at the biennial meeting of the Society for Research in Child Development, Baltimore.

Parsons, J., Kaczala, C., & Meese, J. (1982). Socialization of achievement attitudes and beliefs: classroom influences. Child Development, 53, 322-339.

Parten, M. (1932). Social participation among preschool children. Journal of Abnormal Psychology, 27, 243-264

Paul, E. (1975). A study of the relationship between separation and field dependency in a group of three-year-old nursery-school children. Unpublished master's thesis, Bank Street College of Education, New York.

Pederson, F., & Wender, P. (1965). Early social correlates of cognitive functioning in six-year-old boys. Child Development, 39, 185-193.

Peevers, B., & Secord, P. (1973). Developmental changes in attributions of descriptive concepts to persons. Journal of Personality and Social Psychology, 26, 120-128.

Pekrun, R. (1990). Social support, achievement evaluations, and self-concepts in adolescence. In L. Oppenheimer (Ed.), The self-concept: European perspectives on its development, aspects and applications (pp. 107-119). Berlin, Heidelberg: Springer.

Peller, L. (Ed.). (1952). Models of children's play. Mental Hygiene, 36, 66-83.

Peterson, A. (1988). Adolescent development. Annual Review of Psychology, 39, 583-607.

Piaget, J. (1962). Play, dreams and imitation in childhood. London: Routledge.

Piers, E. (1984). Piers-Harris Children's Self-Concept scale: Revised manual 1984. Los Angeles, CA: Western Psychological Services.

Pollis, N., & Doyle, D. (1972). Sex-role, status and perceived competence among first-graders. Perceptual and Motor Skills, 34, 235-238.

Powell, P., & Haden, T. (1987). The intellectual and psychosocial nature of extreme giftedness. Roeper Review, 6(3), 131-133.

Purkey, W. (1970). Self-concept and school achievement. Englewood Cliffs, NJ: Prentice-Hall.

Putallaz, M., White, A., & Shipman, R. (1985, April). Sociometric status

and adjustment: A developmental perspective. Paper presented at the biennial meeting of the Society of Research in Child Development, Toronto.

Reis, S. (1987). We can't change what we don't recognize: Understanding the special needs of gifted females. Gifted Child Quarterly, 31, 83-89.

Rogers, A. (1993). Ordinary courage in girls' and womens' lives. Harvard Educational Review, 63, 265-294.

Rogers, T. (1981). A model of the self as an aspect of the human information-processing system. In N. Cantor & J. Kihlstrom (Eds.), Personality, cognition and social interaction (pp. 193-214). Hillsdale, NJ: Erlbaum.

Roopnarine, J. (1984). Sex-typed socialization in mixed-age preschool class-rooms. Child Development, 55, 1078-1084.

Rosenberg, M. (1979). Conceiving the self. New York: Basic Books.

Rosenberg, M. (1989). Society and the adolescent self-image (Rev. ed.). Middletown, CT: Wesleyan University Press.

Rosenthal, R., & Jacobsen, L. (1969). Pygmalion in the classroom: Self-fulfilling prophesies and teacher expectations. New York: Holt, Rinehart & Winston.

Rubenstein, C., & Shaver, P. (1982). The experience of loneliness. In L. Peplau & D. Perlman (Eds.), Loneliness: A sourcebook of current theory, research, and therapy (pp. 206-223). New York: Wiley.

Rubin, K. (1985). Socially withdrawn children: An "at risk" population? In B. Schneider, K. Rubin & J. Ledingham (Eds.), Children's peer relations: Issues in assessment and intervention (pp. 125-139). New York: Springer-Verlag.

Rubin, K., & Mills, R. (1988). The many faces of isolation. Journal of Consulting and Clinical Psychology, 6, 916-924.

Rubin, K., Daniel-Beirness, T., & Bream, L. (1983). Social isolation and problem solving: A longitudinal study. Journal of Consulting and Clinical Psychology, 52, 17-25.

Rubin, K., Fein, G., & Vandergerg, B. (1983). Play. In E. Hetherington (Ed.), Handbook of child psychology: Vol. 4. Socialization, personality, and social development (pp. 693-774, 4th ed.). New York: Wiley.

Rubin, K., LeMare, L. & Lollis, S. (1990). Social withdrawal in childhood: Developmental pathways to peer rejection. In S. Asher & J. Coie (Eds.), Peer rejection in childhood (pp. 217-249). Cambridge, MA: Cambridge University Press.

Ruble, D., & Flett, G. (1988). Conflicting goals in self-evaluative information seeking: Development and ability level analyses. Child Development, 59, 96-106.

Ruble, D., & Nakamura, C. (1972). Task orientation versus social orientation in young children and their attention to relevant social cues. Child Development, 43, 471-480.

Russell, D., Peplau, L., & Cutrona, C. (1980). The revised UCLA loneliness scale: Concurrent and discriminant validity evidence. Journal of Personality and Social Psychology, 39, 472-480.

Saegert, S., & Hart, R. (1977). The development of environmental competence in girls and boys. Play: Anthropological perspective. New York: Leisure Press.

Saltz, E., Dixon, D., & Johnson, J. (1977). Training disadvantaged preschoolers on various fantasy activities: Effects on cognitive functioning and impulse control. Child Development, 48, 367-380.

Sanford, L., & Donovan, M. (1985). Women and self-esteem. New York: Penguin.

Saracho, O. (1985a). A modification of the ABC scale. Journal of Personality Assessment, 49(2), 154-155.

Saracho, O. (1985b). Young children's play behavior and cognitive style. Early Childhood Development and Care, 22, 1-18.

Saracho, O. (1986). Validation of two cognitive measures to assess field-dependence/independence. Perceptual and Motor Skills, 63, 255-263.

Saracho, D. (1989). The factorial structure of three-to-five year old children's social behavior: Cognitive style and play. Journal of Research and Development in Education, 22, 21-28.

Sarbin, T. (1962). A preface to a psychological analysis of the self. Psychological Review, 59, 11-22.

Schenkel, S. (1975). Relationship among ego identity status, field-independence, and traditional femininity. Journal of Youth and Adolescence, 4, 73-83.

Schleifer, M., & Douglas, M. (1973). Moral judgments, behavior and cognitive style in young children. Journal of Behavioral Science, 5, 133-144.

Schmeck, R. (1981). Inventory of learning processes. Paper presented at the Student Learning Styles Conference, New Orleans.

Schofield, J. (1981). Complementary and conflicting identities: Images and interaction in an inter-racial school. In S. Asher & J. Gottman (eds.), Development of children's friendships (pp. 53-90). Cambridge, UK: Cambridge University Press.

Schwartz, L. (1980). Advocacy for the neglected gifted: Females. Gifted Child Quarterly, 24, 113-117.

Selman, R. (1980). The growth of interpersonal understanding. New York: Academic Press.

Shain, L., Farber, S., & Barry, A. (1989). Female identity development and self-reflection in late adolescence. Adolescence, 24, 381-392.

Shavelson, R., & Bolus, R. (1982). Self-concept: The interplay of theory and methods. Journal of Educational Psychology, 74, 3-17.

Shavelson, R., Hubner, J., & Stanton, G. (1976). Validation of construct interpretations. Review of Educational Research, 46, 407-441.

Shaw, M., & McCuen, J. (1960). The onset of academic underachievement in bright children. Journal of Educational Psychology, 51, 103-108.

Sigel, I. (1970). The distancing hypothesis: A causal hypothesis for the acquisition of representational thought. In M. Jones (Ed.), Miami Symposium on the prediction of behavior, 1968: Effect of early experiences (pp. 99-118). Coral Gables, FL: University of Miami Press.

Sigel, I. (1993). Educating the young thinker: A distancing model of preschool education. In J. Roopnarine & J. Johnson (Eds.), Approaches to early childhood education (2nd. ed.) (pp. 179-194). New York: Merrill.

Sigel, I., & McGillicuddy-Delisi, A. (1984). Parents as teachers of their children: A distancing behavior model. In A. Pellegrini & T. Yawkey (Eds.), The development of oral and written language in social contexts (pp. 71-92). Norwood, NJ: Ablex.

Simmons, R., & Blyth, D. (1987). Moving into adolescence: The impact of pubertal change and school context. New York: Aldine De Gruyter.

Simmons, R., Rosenberg, R., & Rosenberg, M. (1973). Disturbance in the self-image at adolescence. American Sociological Review, 38, 553-568.

Simon, T., & Smith, P. (1983). The study of play and problem solving in preschool children: Have experimenter effects been responsible for previous results? British Journal of Developmental Psychology, 1, 289-297.

Simpson, A. & Erickson, M. (1983). Teachers' verbal and nonverbal communication patterns as a function of teacher race, student gender, and student race. American Educational Research Journal, 20, 183-198.

Singer, J. (1961). Imagination and waiting ability in young children. Journal of Personality, 29, 396-413.

Siperstein, G., & Goding, M. (1985). Teachers' behavior toward LD and non LD children: A strategy for change. Journal of Learning Disabilities, 18, 139-144.

Skrypnek, B., & Snyder, M. (1982). On the self-perpetuating nature of stereotypes about women and men. Journal of Experimental Social Psychology, 18, 277-291.

Slade, A. (1987). Quality of attachment and early symbolic play. Developmental Psychology, 23, 78-85.

Slavin, R. (1991). Educational psychology (3rd. ed.). Englewood Cliffs, NJ: Prentice-Hall.

Smetana, J., & Letourneau, J. (1984). Development of gender constancy and children's sex-typed free-play behaviour. Developmental Psychology, 20, 691-696.

Smilansky, S. (1968). The effects of sociodramatic play on disadvantaged preschool children. New York: Wiley.

Smith, R., & Smoll, F. (1990). Self-esteem and children's reactions to youth sport coaching behaviors: A field study of self-enhancement

processes. Developmental Psychology, 26, 987-993.

Smith, P., & Daglish, L. (1977). Sex differences in parent and infant behaviour in the home. Child Development, 48, 1250-1254.

Solano, C. (1977). Teacher and pupil stereotypes of gifted boys and girls. Talents and Gifts, 19, 4-8.

Sousa-Poza, J., Rohrberg, R., & Shulman, E. (1973). Field dependence and self-disclosure. Perceptual and Motor Skills, 36, 735-738.

Sroufe, L. (1983). Infant-caregiver attachment and patterns of adaptation in preschool: Roots of maladaptation and competence. In M. Perlmutter (Ed.), Minnesota symposia on child psychology (Vol. 16, pp. 41-81). Hillsdale, NJ: Erlbaum.

Steele, C. (1981). Play variables as related to cognitive constructs in three-to six-year-olds. Journal of Development in Education, 14, 58-72.

Steele, C. (1989). Cognitive style and the gifted young child. Early Childhood Development and Care, 51, 157-174.

Strachan, A., & Jones, D. (1982). Changes in identification during adolescence: A personal construct-theory approach. Journal of Personality Assessment, 46, 546-550.

Sullivan, H. (1953). The interpersonal theory of psychiatry. New York: Norton.

Sutton-Smith, B. (1967). The role of play in cognitive development. Young Children, 22, 361-370.

Sutton-Smith, B. (1980). Piaget play and cognition revisited. In W. Overton (Ed.), The relationship between social and cognitive development (pp. 84-96). New York: Erlbaum.

Swann, W. (1987). Identity negotiation: Where two roads meet. Journal of Personality and Social Psychology, 53, 1038-1051.

Swann, W., Hixon, J., Stein-Seroussi, A., & Gilbert, D. (1990). The fleeting gleam of praise: Cognitive processes underlying behavioral reactions to self-relevant feedback. Journal of Personality and Social Psychology, 59, 17-26.

Sylva, K., Bruner, J., & Genova, P. (1976). The role of play in the problem-solving of children 3-5 years old. In J. Bruner, A. Jolly & K. Sylva (Eds.), Play: Its role in development and evolution (pp. 244-257). New York: Basic Books.

Tan, R. (1979). TV beauty ads and role expectations of adolescent female viewers. Journalism Quarterly, 56, 283-288.

Tavris, C. (1992). The mismeasure of women. New York: Simon & Schuster.

Tesser, A. & Campbell, J. (1983). Self-definition and self-evaluation maintenance. In J. Suls & A. Greenwalk (Eds.), Psychological perspectives on the self (Vol. 2, pp. 1-31). Hillsdale, NJ: Erlbaum.

Tobin-Richards, M., Boxer, A., & Peterson, A. (1983). The psychological significance of pubertal change: Sex differences in perceptions of self

during early adolescence. In J. Brooks-Gunn & A. Peterson (Eds.), Girls at puberty (pp. 127-154) New York: Plenum Press.

Truhon, S. (1983). Playfulness, play and creativity: A path-analysis model. Journal of Genetic Psychology, 143, 19-28.

Unger, R., & Crawford, M. (1992). Women and gender: A feminist psychology. New York: McGraw-Hill.

Van Blerkom, M. (1988). Field dependence, sex role self-perceptions and mathematics achievement in college students: A closer examination. Contemporary Educational Psychology, 13, 339-347.

Verma, O., & Upadhyay, S. (1980). Extroversion in relation to conflict and anxiety. Indian Psychological Review, 19, 16-19.

Vernon, P. (1972). Sex differences in personality structure at age 14. Canadian Journal of Behaviourial Science, 4, 283-297.

Vygotsky, L. (1966). Play and its role in the mental development of the child. Journal of Soviet Psychology, 12(6), 62-76.

Wagner, D., Ford, R., & Ford, T. (1986). Can gender inequalities be reduced? American Sociological Review, 51, 47-61.

Walker, L., & Greene, J. (1987). Negative life events, psychological resources, and psychophysiological symptoms in adolescents. Journal of Clinical Child Psychology, 16, 29-36.

Wasserman, S. (1992). Serious play in the classroom, Childhood Education, 133-139.

Weinreich, P., Doherty, J., & Harris, P. (1985). Empirical assessment of

identity in anorexia nervosa and bulimia nervosa. Journal of Psychiatric Research, 19, 297-302.

Weiss, R. (19730. Loneliness: The experience of emotional and social isolation. Cambridge, MA: MIT Press.

Welsh, G. (1977). Personality correlates of intelligence and creativity in gifted adolescents. In J. Stanley, W. George & C. Solano (Eds.), The gifted and the creative: A fifty-year perspective (pp. 108-122). Baltimore, MD: John Hopkins University Press.

Wender, P., Pederson, F., & Waldrop, M. (1967). A longitudinal study of early social behavior and cognitive development. American Journal of Orthopsychiatry, 37, 691-696.

Werner, H. (1957). The concept of development from a comparative and organismic point of view. In D. Harris (Ed.), The concept of development (pp. 125-148). Minneapolis, MN: University of Minnesota Press.

White, R. (1959). Motivation reconsidered: The concept of competence. Psychological Review, 66, 297-333.

White, R. (1971). Urge towards competence. American Journal of Occupational Therapy, 25, 271-274.

Wilgosh, L. (1994). The underachievement of girls: A societal rather than a gender issue. Education Canada, 34(1), 18-23.

Williams, J. (1975). Perceptual style and fencing skill. Perceptual and

Motor Skills, 40, 282.

Williams, G., & Asher, S. (1987, April). Peer- and self-perceptions of peer rejected children: Issues in classification and subgrouping. Paper presented at the biennial meeting of the Society for Research in Child Development, Baltimore.

Winestine, M. (1969). Twinship and psychological differentiation. Journal of the American Academy of Child Psychiatry, 8, 436-455.

Witkin, H. (1950). Individual differences in ease of perception of embedded figures. Journal of Personality, 19(1), 1-15.

Witkin, H. (1965). Psychological differentiation and forms of pathology. Journal of Abnormal Psychology, 70, 317-336.

Witkin, H., & Goodenough, D. (1977). Field dependence and interpersonal behavior. Psychological Bulletin, 4, 661-689.

Witkin, H., & Goodenough, D. (1981). Cognitive styles: Essence and origins. Madison, CT: International Universities Press.

Witkin, H., Moore, C., Goodenough, D., & Cox, P. (1977). Field-dependent and field-independent cognitive styles and their educational implication. Review of Educational Research, 47, 1-64.

Witkin, H., Oltman, P., Raskin, E., & Karp, S. (1971). A manual for the embedded figures tests. Palo Alto, CA: Consulting Psychologists Press.

Witkin, H., Dyk, R., Faterson, H., Goodenough, D., & Karp, S. (1962). Psychological differentiation. New York: Wiley.

Witkin, H., Lewis, H., Hertzman, M., Machover, K., Meissner, P., & Wapner, S. (1954). Personality through perception. New York: Harper.

Wolf, D., & Gardner, H. (1979). Style and sequence in early symbolic play. In M. Franklin & N. Smith (Eds.), Symbolic Functioning in Childhood (p. 119). Hillsdale, NJ: Erlbaum.

Wolf, D., & Grollman, S. (1982). Ways of playing: Individual differences in imaginative style. In D. Pepler & K. Rubin (Eds.), The play of children: Current theory and research (pp. 44-63). Basel, Switzerland: Karger.

Wolfgang, C. (1977). Helping aggressive and passive preschoolers through play. Columbus, OH: Merrill.

Wong, K. (1976). Psychological differentiation as a determinant of friendship choice. Unpublished doctoral dissertation, University of New York, New York.

Woodward, J., & Kalyan-Masih, V. (1990). Loneliness, coping strategies and cognitive styles of the gifted rural adolescent. Adolescence, 25, 977-987.

Younger, A., & Boyko, K. (1987). Aggression and withdrawal as social schemas underlying children's peer perceptions. Child Development, 58, 1094-1100.

APPENDIX A

INSTRUMENTS

SELF-ESTEEM INVENTORY (SEI)

Please mark each statement in the following way:

If the statement describes how you usually feel, put a check (√) in the column, "*Like Me.*"

If the statement does not describe how you usually feel, put a check (√) in the column "*Unlike Me.*"

There are no right or wrong answers.

	Like Me	*Unlike Me*
1. I spend a lot of time daydreaming.		
2. I'm pretty sure of myself.		
3. I often wish I were someone else.		
4. I'm easy to like.		
5. My parents and I have a lot of fun together.		
6. I never worry about anything.		
7. I find it very hard to talk in front of the class.		
8. I wish I were younger.		
9. There are lots of things about myself I'd change if I could.		
10. I can make up my mind without too much trouble.		
11. I'm a lot of fun to be with.		
12. I get upset easily at home.		
13. I always do the right thing.		
14. I'm proud of my school work.		
15. Someone always has to tell me what to do.		
16. It takes me a long time to get used to anything new.		
17. I'm often sorry for the things I do.		
18. I'm popular with kids my own age.		
19. My parents usually consider my feelings.		
20. I'm never unhappy.		
21. I'm doing the best work that I can.		
22. I give in very easily.		
23. I can usually take care of myself.		
24. I'm pretty happy.		
25. I would rather play with children younger than me.		

	Like Me	*Unlike Me*
26. My parents expect too much of me.		
27. I like everyone I know.		
28. I like to be called on in class.		
29. I understand myself.		
30. It's pretty tough to be me.		
31. Things are all mixed up in my life.		
32. Kids usually follow my ideas.		
33. No one pays much attention to me at home.		
34. I never get scolded.		
35. I'm not doing as well in school as I'd like to.		
36. I can make up my mind and stick to it.		
37. I really don't like being a boy—girl.		
38. I have a low opinion of myself.		
39. I don't like to be with other people.		
40. There are many times when I'd like to leave home.		
41. I'm never shy.		
42. I often feel upset in school.		
43. I often feel ashamed of myself.		
44. I'm not as nice looking as most people.		
45. If I have something to say, I usually say it.		
46. Kids pick on me very often.		
47. My parents understand me.		
48. I always tell the truth.		
49. My teacher makes me feel I'm not good enough.		
50. I don't care what happens to me.		
51. I'm a failure.		
52. I get upset easily when I'm scolded.		
53. Most people are better liked than I am.		
54. I usually feel as if my parents are pushing me.		
55. I always know what to say to people.		
56. I often get discouraged in school.		
57. Things usually don't bother me.		
58. I can't be depended on.		

Playfulness-Nonplayfulness Scale (Form A)

RATING INSTRUCTIONS

As you look at adolescents in a classroom setting, you realize that they differ in the way they move about, address themselves to their tasks, and interact with peers and teachers.

In this study we are trying to assess how much spontaneity can be found in the behavior of high school students in the classroom.

Attached you will find a rating measure made up of five scales that refer to a student's behavior in class. You will note that each of the five scales or questions has two parts. Part A of the question aims at measuring the frequency or quantity of the trait; Part B tries to assess the quality of the trait shown. For example, "How consistently does the student show a sense of fun?" would be the quantity of the trait, and "How much is wit and subtlety a part of his sense of humor?" would be the quality of the trait.

We hope that we shall have your cooperation in this work and that you will find it possible and worthwhile to look at the students in your classroom along the traits suggested in the rating scales and give us your evaluation of them.

When you rate the students, you will, of course, want to compare them with one another as well as keep in mind a general standard for these traits in adolescents in the high school setting.

It is easier and better to rate all students first on one trait or question and then do the same for each of the six other questions. The rating scales have, therefore, been set up for one trait per page.

PLEASE PUT DOWN THE FIGURE THAT BEST INDICATES YOUR EVALUATION OF THE STUDENT'S PRESENT STANDING.

A PROFILE IS GIVEN AT THE EXTREME ENDS OF EACH SCALE AS AN AID IN MAKING YOUR RATING. THE SCALE IS TO BE REGARDED AS A CONTINUUM AND THE IN-BETWEEN NUMBERS SHOULD BE USED TO INDICATE DEGREES IN FREQUENCY AND INTENSITY.

Any comments about the content or form of the questions, or about any difficulties that you may have in answering them, will be welcomed.

Thank you for your help in this study.

RATING SCALES

SCALE IA. *How consistently does the student show spontaneous physical movement and activity in class?*

Physically on the move				Physically rigid
5	4	3	2	1

This is the student who moves around a lot, likes to change his/her seat, has trouble settling down, fidgets with things, mischievously throws objects.

This is the student who sits stiffly, with a tense facial expression and a rigid manner.

SCALE IB. *What degree of energy does the student show in physical activity?*

Physically alert				Physically apathetic
5	4	3	2	1

This is the student who has an animated and alert facial expression, waves his/her hand to be recognized, uses gestures freely to underline a point, nods in response to teacher's points.

This is the student who slumps in his/her seat, looks sluggish and sleepy, yawns, and stares into space.

SCALE IIA. *How consistently does the student show enthusiasm during classroom activities?*

Enthusiastic				Discouraged
5	4	3	2	1

This is the student who is eager and enthusiastic in his/her approach to work and optimistic and high-spirited.

This is the student who needs reassurance, is unhappy and sullen, gets easily discouraged, and is unsure of himself/herself.

SCALE IIB. *With what ease (freedom) does the student show joy?*

Relaxed (spontaneous)				Tense (constricted)
5	4	3	2	1

This is the student who is relaxed and boisterous, chuckles and laughs, can express feelings freely, sometimes unpredictably.

This is the student who is tense and quiet, rarely laughs, lacks spontaneity, stereotype in reactions (you just know what he/she is or is not going to do next).

SCALE IIIA. *How consistently does the student show a sense of fun (humor) in class?*

Fun-loving				Humorless
5	4	3	2	1

This is the student who is the entertainer, who constantly makes jokes, enjoys horseplay, clowns engages in cross-sex teasing.

This is the student who becomes irritable in a fun situation, who is anxious to get back to the "real business"—the lesson—who fails to see the funny side of situations.

SCALE IIIB. *How much is wit and subtlety a part of his/her sense of humor in class?*

Accepting in wit				Hostile in wit
5	4	3	2	1

This is the student who recognizes and searches for the humor in situations, can take teasing and teases others, including the teacher, who uses wit in puns, off-beat comparisons, and sometimes slightly off-color remarks.

This is the student who laughs at the discomfort of others, gets angry when he/she is the butt of a joke, hits back with insults when teased.

SCALE IVA. *How consistently is the student engaged in interaction with peers in class?*

Group-oriented				Self-oriented
5	4	3	2	1

This is the student who is busy passing notes, talking to neighbors, and seeking attention also by pushing and shoving, and calling out in class

This is the student who keeps to himself/herself, is "a loner" does not respond to classmates, and does not, on his/her own, seek interaction with them

SCALE IVB. *What is the tone or quality of the involvement with peers in class?*

Friendly				Rejecting
5	4	3	2	1
This is the student who is outgoing, friendly, able to move from one group to another.				This is the student who gets easily hurt, is on the defensive with others, wants to hurt others, and is uncooperative.

SCALE VA. *How consistently does the student show spontaneity in intellectual tasks in class?*

Intellectually alive				Intellectually stagnant
5	4	3	2	1
This is the student who is curious, inventive, volunteers frequently, introduces relevant and sometimes far-out material in questions and answers.				This is the student who approaches work in a routine and mechanical way, does not volunteer in class, and, when called upon, does not respond, sometimes daydreaming or appearing bored.

SCALE VB. *What is the quality of the student's work involvement in class?*

Erratic				Conscientious
5	4	3	2	1
This is the student who is more concerned with play than work, is bored with the regular classroom atmosphere, and is off in his/her own world, sometimes asking questions to disrupt the lesson.				This is the student who is conscientious, completes his/her assignments, and takes his/her work seriously—sometimes too seriously.

Group Embedded Figures Test Instructions

The examiner (E) will read the Directions printed on the booklet and instructs the subjects to complete the 2 practice problems. The subjects are asked to stop once they get to the end of Page 3 and not to go beyond. E will circulate the classroom to ensure the correct completion of the two practice problems and that subjects do not turn past Page 3.

Once all subjects have completed the practice problems, E will read the statements at the bottom of Page 3, stressing the necessity for tracing all line of the Simple Form, including the inner lines of the cube, Simple Form E, as well as for erasing all incorrect lines.

E will ask subjects if they have any questions about the directions and to raise their hand if they need a new pencil during the test.

E will state the following directions, "When I give the signal, turn the page and start the First Section. You will have 2 minutes for the 7 problems in the First Section. Stop when you reach the end of this section. Go ahead " (Witkin et al., 1971, p. 27)!

As the subjects complete this practice section, E will circulate the classroom and give additional explanations to students who appear to be having difficulty. After 2 minutes E will state the following:

STOP - Whether you have finished or not. When I give the signal, turn the page and start the Second Section. You will have 5 minutes for the 9 problems in the Second Section. You may not finish all of them but work as quickly and accurately

as you can. Raise your hand if you need a new pencil during the test. Ready, go ahead (Witkin et al., 1971, p. 27).

After 5 minutes, E will state the following:

STOP - Whether you have finished or not. When I give the signal, turn the page and start the Third Section. You will have 5 minutes for the 9 problems in the Third Section. Raise your hand if you need a new pencil during the test. Ready, go ahead (Witkin et al., 1971, p. 28).

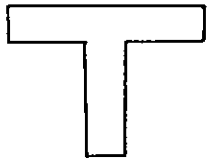
After 5 minutes, E will say, "STOP - Whether you have finished or not. Please close your test booklets" (Witkin et al., p. 28).

SIMPLE FORMS

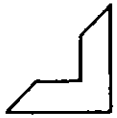
178

A

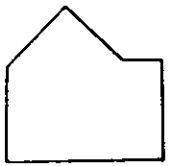
B



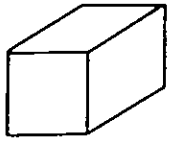
C



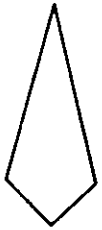
D



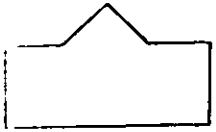
E



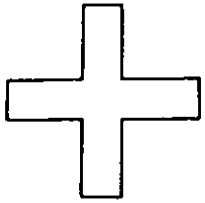
F



G



H



Consulting Psychologists Press, Inc.
3803 E. Bayshore Road • Palo Alto, CA 94303

GROUP EMBEDDED FIGURES TEST

By Philip K. Oltman, Evelyn Raskin, & Herman A. Witkin

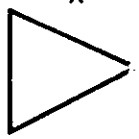
Name _____ Sex _____

Today's date _____ Birth date _____

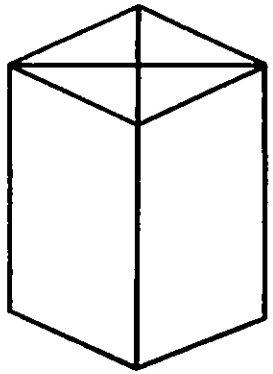
INSTRUCTIONS: This is a test of your ability to find a simple form when it is hidden within a complex pattern.

Here is a simple form which we have labeled "X":

X



This simple form, named "X", is hidden within the more complex figure below:

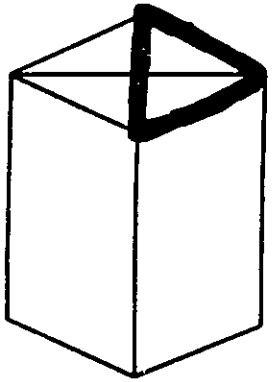


Try to find the simple form in the complex figure and trace it *in pencil* directly over the lines of the complex figure. It is the SAME SIZE, in the SAME PROPORTIONS, and FACES IN THE SAME DIRECTION within the complex figure as when it appeared alone.

When you finish, turn the page to check your solution.

This is the correct solution, with the simple form traced over the lines of the complex figure:

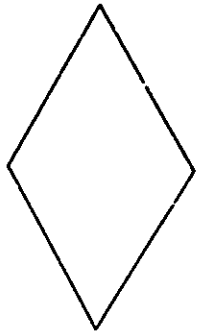
179

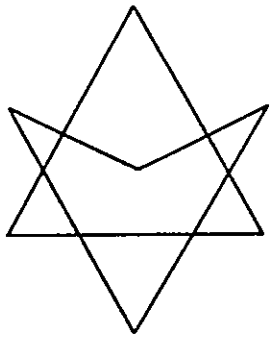


Note that the top right-hand triangle is the correct one; the top left-hand triangle is similar, but faces in the opposite direction and is therefore *not* correct.

Now try another practice problem. Find and trace the simple form named "Y" in the complex figure below it:

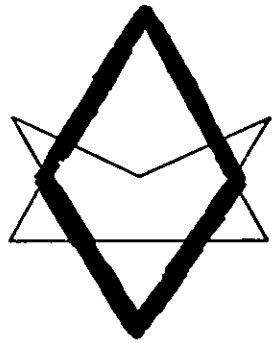
Y





Look at the next page to check your solution.

Solution:



In the following pages, problems like the ones above will appear. On each page you will see a complex figure, and under it will be a letter corresponding to the simple form which is hidden in it. For each problem, look at the BACK COVER of this booklet to see which simple form to find. Then try to trace it in pencil over the lines of the complex figure. Note these points:

1. Look back at the simple forms as often as necessary.

2. ERASE ALL MISTAKES.

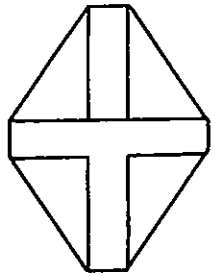
3. Do the problems in order. Don't skip a problem unless you are absolutely "stuck" on it.

4. Trace ONLY ONE SIMPLE FORM IN EACH PROBLEM. You may see more than one, but just trace *one* of them.

5. The simple form is always present in the complex figure in the SAME SIZE, the SAME PROPORTIONS, and FACING IN THE SAME DIRECTION as it appears on the back cover of this booklet.

Do not turn the page until the signal is given.

1



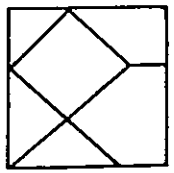
Find Simple Form "B"

2

Find Simple Form "G"

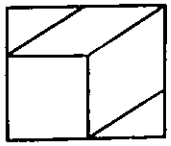
Go on to the next page

3



Find Simple Form "D"

4



Find Simple Form "E"

Go on to the next pag

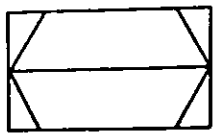
5

Find Simple Form "C"

6

Find Simple Form "F"

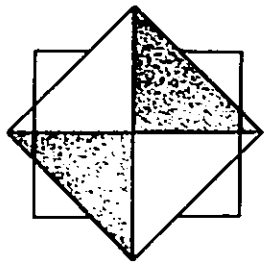
Go on to the next page

7 

Find Simple Form "A"

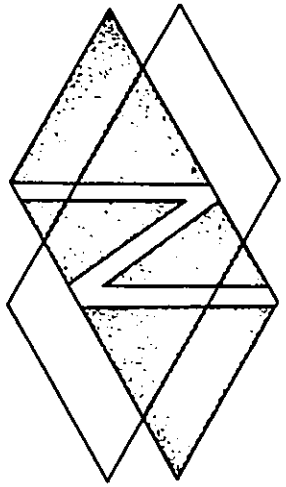
PLEASE STOP. *Wait fo*
further instruction

1



Find Simple Form "G"

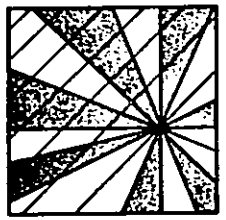
2



Find Simple Form "A"

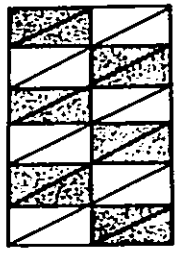
Go on to the next page

3



Find Simple Form "G"

4



Find Simple Form "E"

Go on to the next pag

5

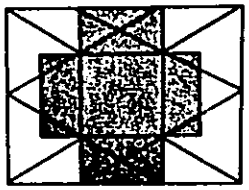
Find Simple Form "B"

6

Find Simple Form "C"

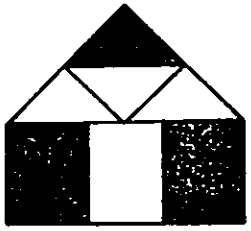
Go on to the next pag

7



Find Simple Form "E"

8

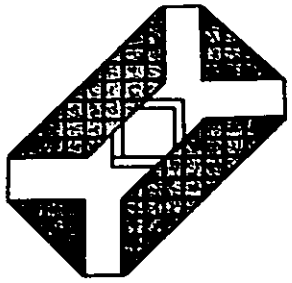


Find Simple Form "D"

Go on to the next pag

188

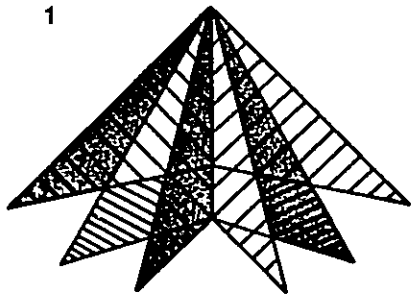
9



Find Simple Form "H"

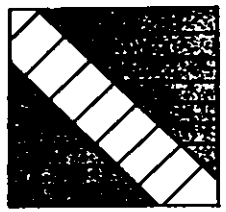
PLEASE STOP. *Wait for*
further instructions.

1



Find Simple Form "F"

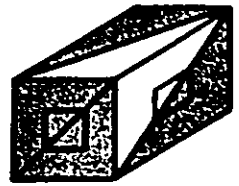
2



Find Simple Form "G"

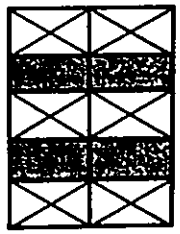
Go on to the next page

3



Find Simple Form "C"

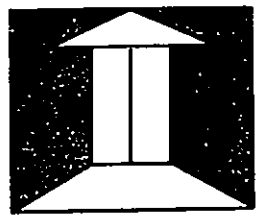
4



Find Simple Form "E"

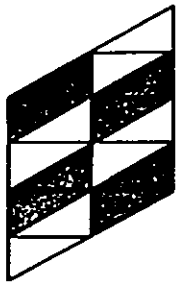
Go on to the next page

5



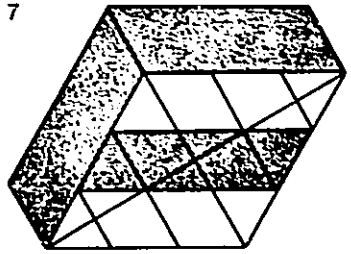
Find Simple Form "B"

6



Find Simple Form "E"

7



Find Simple Form "A"

8

Find Simple Form "C"

Go on to the next pac

9

Find Simple Form "A"

PLEASE STOP. Wait for
further instructions

APPENDIX B

LETTER TO SCHOOL BOARD

November 1, 1994

Dear Mr. Smith:

It is my pleasure to approach the Windsor Board of Education with a research request for the participation of three of your elementary schools, specifically three Grade 6 classrooms, in my Master of Education thesis. This thesis has been approved by the Graduate Studies and Ethics Committees of the Faculty of Education, University of Windsor.

I am a Master of Education student at the University of Windsor Ontario and I am conducting a study under the supervision of Dr. Innerd, Faculty Advisor, to investigate the possible relationships between self-concept, cognitive style and playfulness in preadolescents. Enclosed is a copy of my proposal to the Graduate Studies Committee.

Background and Purpose of Proposed Research

Researchers have just begun to study the role that social-cognitive processes hold in determining social behaviour and the construction of the self-concept. Although past educational and psychological studies have demonstrated that cognitive styles such as field independence/dependence (the ability to separate an element from an embedding context) may be manifestations of other areas of psychological and social functioning, and thus occupy an integral part in the process of self-concept formation and the development and maintenance of a playfulness attitude, research on these three concepts remain sparse. Furthermore, despite the fact that early adolescence (11-13 years) is a pivotal time in the development of cognitive style, self-

concept and the attitude of playfulness, the relationships between these three variables during preadolescence remains to be explored. Moreover, recent research on the influence of socio-cultural factors on preadolescent social-cognitive development, especially stereotypic social-role expectations, suggests that the ability to perceptionally differentiate or keep things separate in experience may have different implications for social and cognitive competence among boys and girls.

Accordingly, through the investigation of the possible connection between cognitive style, self-concept and playfulness, the purpose of my research is twofold: 1) to increase educator's understanding and awareness of the significant role all three concepts occupy in the preadolescent's inner and social world; and 2) to illustrate the influence of sterotypic social-roles on psychological development by exploring the patterns that may exist among the three variables for each gender. Thus, through the study of both the cognitive components (field independence/dependence) and affective components (self-concept and playfulness) of preadolescent development, the proposed study is particularly relevant to education by enabling educators to recognize and understand the critical roles both cognition and affect play in the learning process.

Proposed Research Sample and Procedures

The proposed study will involve three classes of Grade 6 students (approximately 30 students in each class) from three elementary schools located within your school board (one class from each school). Upon completion of a Parental Consent Form, the students will be administered a self-report questionnaire that measures self-concept (Coopersmith's Self-Esteem Inventory - SEI), and a

perceptual test that measures cognitive style by asking students to locate series of hidden geometric figures within a distracting visual context (Group Embedded Figures Test - GEFT). In addition, the previous and current classroom teachers of the participating students will be asked to complete the Playfulness/Nonplayfulness Scale (PF/NonPF) which involves rating students' classroom behaviour and attitudes in terms of playfulness.

For the completion of my study I request the permission to perform the following procedure in the three designated schools:

1. Approach each participating principal and teacher with my research request including an explanatory cover letter which will be accompanied by copies of consent forms and test instruments to be used in the study.

2. Approach the current classroom teacher and previous teacher of the participating students from the school year of 1993-1994, to complete a questionnaire that will rate students on their playfulness behaviour and attitudes. This questionnaire will approximately take one hour of the classroom teacher's time.

3. Upon the permission of the principal and teacher, a total of 5-7 minutes on a date to be determined, for an introductory presentation which will include a description of the study and distribution of the Parent Consent Forms to the students.

4. Approximately one hour of another school day will be required for the group administration of the perceptual test (GEFT) (20 min) and the self-report questionnaire on self-concept (SEI) (30 min); and one hour of the teacher's time (both current teacher and previous one from 1993-1994) will be required for the completion

of the PF/NonPF. Students and teachers will be given the opportunity to ask questions before, during and after the study and will be free to withdraw at any given time.

5. Return to the school at a subsequent date for the delivery of an appreciative presentation to the participating class which will include the distribution of thank-you letters to all participants and a summary of research findings.

For your inspection, I have enclosed the cover letters, consent forms and test instruments that I plan to distribute to the teachers, parents and students. The letter to the classroom teacher outlines in detail the procedures of the study. To ensure confidentiality, the proposed study will not contain the names of the participating children, parents, teachers and schools or school board.

Anticipated Findings and Implications

It is anticipated that the proposed study will find significant correlations between the variables of field-independence/dependence, self-concept and playfulness attitude. More specifically, distinct patterns are expected to exist among the variables with respect to gender. Thus, results obtained from the proposed research may enhance educators understanding of the underlying social-cognitive processes of the preadolescent, which may lead to the subsequent development and implementation of a more humanistic and holistic educational approach.

I hope that you consider the study worth the time that it would require of your teachers and students. In return, it would be my pleasure to provide you with a summary of my findings. Please do not hesitate to contact me if you have any

questions or concerns regarding my research. I may be reached at the Faculty through my advisor Dr. W. Innerd (Phone. No. 253-4232, Ext. 3830) or at home (253-0623).

Thank you very much for your time. Your cooperation is greatly appreciated.

Sincerely,

Sandra Bosacki, B.A. (Hons.) Psychology

Enclosures

APPENDIX C

LETTER TO PRINCIPAL

November 25, 1994

Dear School Principal:

In collaboration with the Research Review Committee of your Board of Education, the Superintendent of Special Education and Special Services has granted me permission to approach you regarding the participation of your school, specifically your Grade 6 classroom in the carrying out of my Master of Education thesis work.

I am a Master of Education student at the University of Windsor Ontario and I am conducting a study under the supervision of Dr. Innerd, Faculty Advisor, to investigate the possible relationships between self-concept, cognitive style and playfulness in preadolescents. Enclosed is a copy of my proposal to the Research Review Committee.

It is my intention to ask permission of yourself, the teachers and the parents of a Grade 6 class within your school to have the children participate in the study. This would occur after receiving your own and the teachers' written permission. On a date to be determined by either yourself or the classroom teacher, I am requesting that I may have a total of 5-7 minutes to introduce myself to the class and to distribute Parent Consent Forms, and one hour on a following date to group administer the following measures: 1) a pencil and paper perceptual test which measures the ability to select a simple shape from a complex background; and 2) a self-report questionnaire on self-concept. Additionally, students will be given the opportunity to ask questions before, during and after and study and will be free to withdraw from

the study at any given time without penalty.

Furthermore, I request your permission to ask the present Grade 6 classroom teacher and the previous teacher of the participating students from the school year of 1993-1994, to complete a questionnaire that will rate students on their playfulness behaviour and attitudes. This questionnaire will approximately take one hour of the classroom teacher's time.

For your inspection, I have enclosed the cover letters, consent forms and test instruments that I plan to distribute to the teachers, parents and students. To ensure confidentiality, the proposed study will not contain the names of the participating children, parents, teachers, schools and school boards. Also, at no time shall I have access to student or parent names. The letter to the classroom teacher outlines in detail the tentative timeline of the study and the tasks involved in the study.

I hope that you consider the study worth the time that it would require of your teachers and students. In return, it would be my pleasure to provide you with a summary of my findings. Please do not hesitate to contact me if you have any questions or concerns regarding my research. I may be reached at the Faculty through my advisor Dr. W. Innerd (Phone. No. 253-4232, Ext. 3830) or at home (253-0623).

Thank you very much for your time. Your cooperation is greatly appreciated.

Sincerely,

Sandra Bosacki, B.A. (Hons.) Psychology

Enclosures

APPENDIX D

LETTER TO CURRENT TEACHER

December 1, 1994

Dear Current Classroom Teacher:

Your principal has granted me permission to approach you with my research request. I am a Master of Education student at the University of Windsor and I am conducting a study under the supervision of Dr. Innerd, Faculty Advisor, to investigate the relationships between self-concept, cognitive style and playfulness in preadolescents.

The required parental consent that is necessary for my study to be implemented will be obtained by asking your students to send home an Informed Consent Form and accompanying Cover Letter that requests Parental Permission for the student to participate in the study. The students will be asked to return the signed Consent Forms to school as soon as possible.

Upon receipt of the Parental Consent Forms, the study will proceed consisting of: a) a self-report questionnaire dealing with self-concept which will be group administered during class hours (Coopersmith Self Esteem Inventory - SEI), requiring 30 minutes of class time; b) the group administration of a 20 minute-long perceptual test (Group Embedded Figures Test - GEFT) to measure cognitive style and c) your participation as classroom teacher by completing a questionnaire (Playfulness-Nonplayfulness Scale - PF/NonPF) for each of your students that rates their classroom behaviour and attitudes in terms of playfulness. The completion of this questionnaire will approximately take one hour of your time.

Additionally, your students playfulness behaviour and attitudes which occurred

during the year of 1993-1994 will also be rated on the Playfulness Scale by their previous teacher. Furthermore, two addtional Grade 6 classrooms from different schools within your board will be requested to participate in this study.

The specific tasks and tentative timeline (dates cited below are provisional) for the study include the following (specific dates are to be determined by you):

December, 1994

I will arrive in your class at a time determined by you for an approximate 5-7 minute presentation which will include an introduction, explanation of my purpose and the distribution of the Cover Letters and Informed Consent Forms to the students. The students will be requested to ask their parents to complete the form, if possible, that evening, and return the signed forms the following school morning.

December, 1994

Days set aside for the collection of the parent's Consent Form. I request that you collect the signed forms and place them in a sealed envelope until I return to the school which would be at your convenience.

January, 1995

I will return to the school to collect any remaining Consent Forms and group administer the SEI and the GEFT. Also, I will request your completion of the PF/NonPF for each of your students which will require about one hour of your time. If you are unable to complete these rating scales during the school day due to time constraints, you may wish to complete these questionnaires at home and I will collect them from you at your convenience.

February, 1995

I will return briefly to your class to distribute thank-you letters to students and parents, including a summary of my research findings.

Through the investigation of the possible connection between playfulness, self-concept and cognitive style, the purpose of my research is twofold: 1) to increase educators' awareness and understanding of the significant role all three concepts occupy in the life of the preadolescent; and 2) to illustrate the influence of stereotypical gender roles on psychological development by demonstrating differences that may occur between the female and male preadolescent experience. Furthermore, by increasing educator's awareness of preadolescent self-system conflict, the difficulty of self-organization and social differentiation may be eased by emphasizing the affective components of education through the promotion of activities that assist in the development of a positive sense of self and the inclusion of a playful attitude in the Junior/Intermediate curriculum (i.e., promotion of divergent thinking or creativity, spontaneity - social and cognitive).

Moreover, by exploring the possible differences that may occur due to gender, I aspire to increase educators cognizance about the experiences of female preadolescents and the ways in which they may significantly differ from those experiences of male students.

To ensure unbiased and valid results, it is crucial that the parents and students participating in this study will not be informed at this time of the particular relationships planned to be explored in this research. The students themselves need to

only be aware that their parents will be asked to grant them permission to participate in a research study being conducted by the University of Windsor to increase their teacher's understanding of the inner world of the preadolescent. Also, students will be given the opportunity to ask questions before, during and after the study and will be free to withdraw from the study at any given time without penalty.

Finally, my research will not mention the name of the Windsor Board of Education, nor the names of the students, school, principals or teachers involved. I will not have access to any parent or student names, thus guaranteeing the anonymity of all concerned.

Enclosed you will find copies of the following: the cover letter and Declaration of Informed Consent form that I plan to send to the parents, test instruments to be used in the study, and two Declaration of Informed Consent forms which you are requested to read and sign (retaining one copy for you records). I thank you very much for your time and cooperation. Please do not hesitate to call me at home (Phone number: 253-0623) if you have any questions or concerns.

I look forward working with you on this study, and I anticipate valuable information for parents and teachers as a result of our efforts.

Sincerely,

Sandra Bosacki, B.A. (Hons.) Psychology

Enclosures

APPENDIX E

LETTER TO PREVIOUS TEACHER

December 2, 1994

Dear Previous Classroom Teacher:

Your principal has granted me permission to approach you with my research request. I am a Master of Education student at the University of Windsor and I am conducting a study under the supervision of Dr. Innerd, Faculty Advisor, to investigate the relationships between self-concept, cognitive style and playfulness in preadolescents.

Your participation as a classroom teacher in the proposed study is requested. I would be grateful if you would agree to complete a questionnaire (Playfulness-NonPlayfulness Scale - PF/NonPF) for each of your former students from the school year (1993-1994). This questionnaire involves rating students' classroom behaviour and attitudes in terms of playfulness and will approximately take one hour of your time. If you are unable to complete these rating scales during school hours (on a date in January, 1995 to be determined by you), you may wish to complete these questionnaires at home and I will collect them from you at your convenience.

Additionally, your former students (currently in Grade 6), will be group administered a self-report questionnaire on self-concept (Coopersmith's Self-Esteem Inventory) and a perceptual test that measures cognitive style (Group Embedded Figures Test). The current Grade 6 teacher of the participating class will also be requested to complete the Playfulness/NonPlayfulness Scale). Furthermore, two additional Grade 6 classroom from different schools within your board will be requested to participate in this study.

Through the investigation of the possible connection between playfulness, self-concept and cognitive style, the purpose of my research is twofold: 1) to increase educators' awareness and understanding of the significant role all three concepts occupy in the life of the preadolescent; and 2) to illustrate the influence of stereotypical gender roles on psychological development by demonstrating differences that may occur between the female and male preadolescent experience. Furthermore, by increasing educator's awareness of preadolescent self-system conflict, the difficulty of self-organization and social differentiation may be eased by emphasizing the affective components of education through the promotion of activities that assist in the development of a positive sense of self and the inclusion of a playful attitude in the Junior/Intermediate curriculum (i.e., promotion of divergent thinking or creativity, spontaneity - social and cognitive).

Moreover, by exploring the possible differences that may occur due to gender, I aspire to increase educators cognizance about the experiences of female preadolescents and the ways in which they may significantly differ from those experiences of male students.

To ensure unbiased and valid results, it is crucial that the parents and students participating in this study will not be informed at this time of the particular relationships planned to be explored in this research. The students themselves need to only be aware that their parents will be asked to grant them permission to participate in a research study being conducted by the University of Windsor to increase their teacher's understanding of the inner world of the preadolescent. Also, students will

be given the opportunity to ask questions before, during and after the study and will be free to withdraw from the study at any given time without penalty.

Finally, my research will not mention the name of the Windsor Board of Education, nor the names of the students, school, principals or teachers involved. I will not have access to any parent or student names, thus guaranteeing the anonymity of all concerned.

Enclosed you will find two copies of the Declaration of Informed Consent form which you are requested to read and sign (one copy may be retained for your personal records and one will be collected by me at a date that is convenient for you).

I thank you very much for your time and cooperation. Please do not hesitate to call me at home (Phone number: 253-0623) if you have any questions or concerns.

I look forward working with you on this study, and I anticipate valuable information for parents and teachers as a result of our efforts.

Sincerely,

Sandra Bosacki, B.A. (Hons.) Psychology

Enclosures

APPENDIX F

CONSENT FORMS

Declaration of Informed Consent for Current Teacher

I consent to participate in this study of the relationships between self-concept, cognitive style and playfulness in Grade 6 students. The main purpose of this research is to increase awareness in both educators and parents of the possible gender differences that may exist among preadolescent girls and boys in the areas of cognitive and emotional development.

I understand the following statements:

(1) My participation in the study will involve completing a questionnaire that involves rating each of my students on their playfulness behaviour and attitudes observed during school hours and permitting the researcher to administer a self-concept questionnaire and perceptual test during classtime.

(2) I am free to withdraw from the study, or refuse to answer any questions at any time without penalty.

(3) My name will not appear anywhere on the questionnaire; my scores will be identified by subject number only. Therefore my anonymity is assured.

(4) I am free to make any complaints known to Dr. Larry Morton, Chair of the Faculty of Education Research Ethics Committee (Office 3338, phone no. 253-4232, Ext. 3835.)

Sandra Bosacki

Signature of Teacher

Date

Declaration of Informed Consent for Previous Teacher

I consent to participate in this study of the relationships between self-concept, cognitive style and playfulness in Grade 6 students. The main purpose of this research is to increase awareness in both educators and parents of the possible gender differences that may exist among preadolescent girls and boys in the areas of cognitive and emotional development.

I understand the following statements:

(1) My participation in the study will involve completing a questionnaire that involves rating each of my Grade 5 students from last year (1993/94) on their playfulness behaviour and attitudes observed during school hours from Sept., 1993 to June, 1994.

(2) I am free to withdraw from the study, or refuse to answer any questions at any time without penalty.

(3) My name will not appear anywhere on the questionnaire; my scores will be identified by subject number only. Therefore my anonymity is assured.

(4) I am free to make any complaints known to Dr. Larry Morton, Chair of the Faculty of Education Research Ethics Committee (Office 3338, phone no. 253-4232, Ext. 3835.)

Sandra Bosacki

Signature of Teacher

Date

Declaration of Informed Consent by Parent/Guardian

I consent to allow my daughter/son (print her/his full name)

_____ to participate in this study on the relationships between self-concept, cognitive style and playfulness. The main purpose of this research is to increase awareness in both educators and parents of the possible gender differences that may exist among preadolescent girls and boys in the areas of cognitive and emotional development.

I understand the following statements:

(1) My child's participation in the study will involve answering a questionnaire regarding self-concept (Coopersmith's Self Esteem Inventory) and completing some hidden figures tasks (Group Embedded Figures Test - GEFT) within a timed setting.

(2) My child will be given the opportunity to ask questions before, during or after the study and is free to withdraw from the study, or refuse to answer any questions at any time without penalty.

(3) My child's name will <u>not</u> appear anywhere on the questionnaire or on the perceptual test; his/her scores will be identified by subject number only, ensuring <u>anonymity</u>.

(4) I am free to make any complaints known to Dr. Larry Morton, Chair of the Faculty of Education Research Ethics Committee (Office 3338, phone no. 253-4232, Ext. 3835).

_____ _____

Sandra Bosacki Signature of Parent/Guardian

_____

Date

APPENDIX G

INITIAL LETTER TO PARENTS

December 1, 1994

Dear Parent/Guardian:

I am a graduate student at the University of Windsor's Faculty of Education and I am interested in studying the possible relationship between self-concept, cognitive style and playfulness in preadolescents. This study has been approved by the School Board Research Ethics Committee and is being conducted in partial fulfillment of the Masters of Education degree under the supervision of Dr. Innerd, Faculty Advisor. I am requesting your permission to allow your child to participate in this study which entails a self-report questionnaire on self-concept and a timed perceptual test for cognitive style. Both your child's present and previous classroom teachers will also be participating in this study by rating your child on playfulness behaviour and attitudes observed in the school.

The Coopersmith Self-Esteem Inventory (SEI) and the Group Embedded Figures Test (GEFT) will be administered to your child's class during school hours and will take approximately one hour. The SEI is a self-report questionnaire that measures children's perceptions, beliefs and feelings about themselves and the GEFT involves a pencil and paper task where your child will be asked to find and trace a series of hidden figures within a timed setting. Also, your child will be given the opportunity to ask questions before, during and after the study and will be free to withdraw from the study at any given time without penalty.

In order for your child to take part in this study, you are requested to read and sign one of the attached Declaration of Informed Consent forms and return it to the school. You may keep the other one for your records. To ensure confidentiality, my study will not contain the name of your child, the school board or any participating schools and teachers. Also, at no time shall I have access to student or parent names.

The goals of my research are twofold: 1) to increase educator's awareness and understanding of how teenagers think and feel; and 2) to show how stereotypes affect the psychological development of preadolescent girls and boys. If you have any questions or would like a summary of the results when the study is completed, I can be reached at the Faculty of Education, University of Windsor (Office 2204, phone no. 253-4232, Ext 3808). I can also be reached through my Thesis Supervisor, Dr. W. Innerd (Office 3326, Ext. 3830). Upon completion, my study will be available for your perusal at the school board office in the Spring of 1995.

Thank you very much for allowing your child to participate. Your cooperation is greatly appreciated.

Sincerely,

Sandra Bosacki, B.A. (Hons.) Psychology

APPENDIX H

SUMMARY LETTER TO PARENTS

March 3, 1995

Dear Parent/Guardian:

I would like to thank you for permitting your child to participate in my research study which took place in early January of this year. The study was conducted as partial requirement for my Master's of Education degree at the University of Windsor and investigated the relationships between self-concept, cognitive style and playfulness in Grade 6 students. The study's main goal was to increase teachers' awareness of the preadolescent school experience.

The data has been analyzed and although individual results are not available due to anonymonity, I have attached a summary of the results obtained for the entire sample. It is my hope that the results may provide some insight for teachers and parents into a preadolescent's perspective and thus benefit all students by encouraging the development of an educational approach that is more sensitive to the needs of the preadolescent.

Copies of my completed Master's thesis will be available in early summer at the Windsor Board of Education. Please feel free to contact me through my advisor (Dr. W. Innerd, 253-4234, Ext. 3830) regarding any questions or concerns you may have about the study.

Once again, thank you for your time and cooperation.

Sincerely,

Sandra Bosacki, B.A. (Hons), B.Ed.

Results Summary

Title of the Study: Field Independence, Self-Concept and Playfulness in Preadolescents.

Participants: 63 Grade 6 students, 33 girls, 30 boys (M = 11.08 years); 9 Teachers, 4 Current and 5 Previous (4 female, 5 male)

Purpose: To investigate the relationship between cognitive style (field independence-dependence), self-concept and playfulness in Grade 6 students.

Main Findings

Gender Differences

Cognitive Style (Group Embedded Figures Test)

No significant gender differences were found between the girls' and boys' GEFT scores, thus, girls and boys did not differ with respect to cognitive style.

Self-Concept (Coopersmith's Self Esteem Inventory)

Girls scored marginally ($p > .08$) higher than boys on both school (academic) self-concept and peer (social) self-concept.

Playfulness (Playfulness-Nonplayfulness Scale)

Due to the high correlation ($r = .85$) between the current and the previous teachers' ratings, only the current teachers' ratings were used in the data analyses.

Although no significant gender differences were found between the total rating score, individual analysis showed that teachers rated girls significantly less physically and cognitively spontaneous than boys.

Correlational Data

Entire Sample (N = 63)

No significant correlations were found between cognitive style, self-concept and

playfulness.

Girls (n = 33)

1. As predicted, significant negative correlations were found between a) cognitive style and self-concept ($r = -.36$, $p < .05$) and b) cognitive style and playfulness ($r = -.52$, $p < .05$). This result suggest that as girls' thinking styles became more field independent or analytical, they reported lower feelings of self-worth and were rated as less playful by their teachers.

2. A significant positive correlation was found between self-concept and playfulness ($r = .38$, $p < .05$) which suggests that as girls reported higher feelings of self-worth (particularly regarding peers) they were rated as more playful by their teachers.

Boys (n = 30)

1. As predicted, a significant positive correlation was found between cognitive style and self-concept ($r = .42$, $p < .05$). In contrast to the girls, this result suggests that as thinking styles in boys became more analytical (field independent), they reported higher feelings of self-worth.

2. Unlike the girls, playfulness was not found to be significantly related to either cognitive style or self-concept, suggesting that teachers may have different expectations for girls and boys regarding playfulness.

Conclusions

The findings of my study suggest that preadolescent girls and boys perceive reality and thus experience life differently. The results of my research may raise awareness in both teachers and parents of how gender-role stereotypes help to shape their beliefs and behaviours towards girls and boys.

VITA AUCTORIS

Sandra Leanne Bosacki was born in 1968 in Hamilton, Ontario. She graduated from Caledonia High School in 1986. From there she went on to the University of Western Ontario where she obtained a B.A. (Hons) in Psychology in 1990. Following a year of working abroad at the University of London, England, she attended the University of Windsor and obtained a B.Ed. (Primary/Junior) in 1992. From 1992-1993 she was employed as an Occasional Teacher for the Haldimand Board of Education and the Haldimand-Norfolk R.C.S.S. Board, teaching grades K - 8. She is currently a candidate for the Master's degree in Education at the University of Windsor and upon graduation in Spring, 1995, plans to continue her studies at the doctoral level at the Ontario Institute for Studies in Education in Toronto.