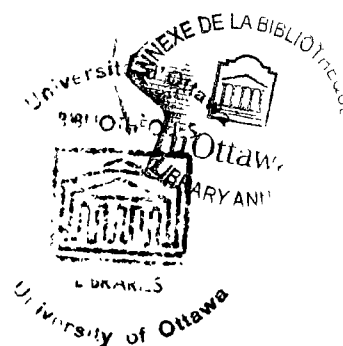


**THE EFFECT OF SEX-TYPE ON PERCEPTION,
SELF-ASSESSMENT AND PERFORMANCE
OF POLICE RECRUITS IN TRAINING**

by Frances E. Himelfarb

Thesis submitted to the School
of Graduate Studies and Research of the
University of Ottawa in partial fulfillment of
the Degree of Doctor of Philosophy



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CURRICULUM STUDORIUM

Frances E. Himelfarb (Weiner) was born January 19, 1948 in Montreal, Quebec. She received the degree of Bachelor of Arts from Carleton University, Ottawa, Ontario in 1970. In 1973, she received the degree of Bachelor of Education and in 1980 the degree of Master of Arts from the University of Ottawa, Ottawa, Canada. The title of her Masters Thesis is 'Sex Role Identity, and Achievement Motivation in Women.'

ABSTRACT

This study tested the applicability of gender schema theory (Bem, 1981; 1985) to the traditionally male-dominated police recruit training situation. The Bem Sex-role Inventory was used to categorize 86 female and 66 male R.C.M.P. recruits as sex-typed or non-sex-typed. Questionnaire and test score data were used to test the differences between sex-typed and non-sex-typed recruits with respect to the extent to which they held gender stereotypic expectations and assessed themselves and performed better in sex-congruent than in sex-incongruent training situations.

A two-way ANOVA procedure was used to test the hypotheses. There was no evidence of the predicted sex-type effect or sex by sex-type interaction; sex, rather than sex-type, was found to be important in accounting for perceptual and performance differences. While a sex-type effect was found with respect to performance, this was only the case for males and was not in the predicted direction. Exploratory analysis, employing the Tukey procedure, served only to confirm the persistent sex-effect.

The study discusses the theoretical and methodological implications of the findings for gender schema theory, the practical implications for the police training setting and proposes an approach for future research to test the theory in such a setting. The findings were interpreted as indicating that Bem's model has limited applicability for the police training setting.

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INTRODUCTION

Sex-typing, as defined by Bem (1981b) is the psychological process whereby humans become masculine or feminine through the acquisition of sex-appropriate personality attributes, behaviours, preferences and self-concepts. In her gender schema theory, Bem (1985) posits that sex-typing derives from gender-schematic processing, a generalized readiness to organize information according to the culture's definitions of maleness and femaleness.

Specifically, gender schema theory holds that sex-typed people, whether male or female, process information in terms of gender schema, perceive themselves and others in culturally stereotyped terms, assess themselves as more able and perform better in sex-congruent situations. Non-sex-typed people are less stereotyped in their thinking. Their self-assessments and performances are therefore less influenced by the sex-congruence of the situation (Bem, 1985).

Support for gender schema theory and the validity of the measure of gender-schematic thinking, the Bem Sex-role Inventory, has been provided consistently in laboratory studies (Bem, 1985). Critics, however, have

raised questions about the adequacy of Bem's conceptual distinction between sex-typed and non-sex-typed individuals and about the range or scope of applicability of gender schema theory (Payne, Connor & Colletti, 1987; Markus, Crane, Bernstein & Siladi, 1982; Spence and Helmreich, 1981). Nevertheless, Bem (1985) and her critics (Payne et al., 1987; Baldwin, Stevens, Critelli & Russell, 1986) agree that gender schema theory may be particularly useful for understanding the effects of sex-typing on perception and behaviour in culturally defined sex-incongruent situations and particularly in an occupational setting (Kalin & Hodgins, 1984). The police training situation provides such an occupational setting.

As women increasingly enter traditionally male-dominated professions such as policing, questions are being raised about the real and perceived differences between the sexes and the source and effects of these differences. Most of the police research has been atheoretical and has focussed on actual gender-based differences in performance and/or on the effects of stereotyping and discrimination by gender in the training situation (Horne, 1980). Gender schema theory allows for the classification of individuals by sex-type rather than gender thus allowing for within-sex differences. Such a classification may contribute to an understanding of the often anomolous findings in studies where gender has been the independent variable.

The purpose of this study, then, is to test the applicability of gender schema theory in a male-dominated occupational setting, a police recruit training situation. Specifically, the study assesses the level of gender-schematic thinking of recruits in the police training situation and the effects of gender-schematic thinking on perceptions of self and others, and on performance of male and female recruits in masculine, feminine and mixed police training situations.

The study is organized in three chapters. The first chapter describes gender schema theory, reviews the relevant research and defines the theoretical problem and specific hypotheses which guided the study. The second chapter describes and discusses the research design. The final chapter presents and discusses the findings and their implications, and suggests areas for future research.

CHAPTER 1

REVIEW OF THE LITERATURE

The purpose of this chapter is to establish the theoretical and empirical base for research on sex-typing in a natural setting. The chapter reviews gender schema theory and relevant research on the effects of sex-typing on perception and behaviour. Critical and unresolved issues in gender schema theory are discussed further. Selected literature on policing and police training is described and its relevance to this study examined. The chapter concludes with specific hypotheses derived from gender schema theory and the theoretical rationale for these hypotheses.

1.1 GENDER SCHEMA THEORY

Bem's (1985) gender schema theory is a particular variant of current theories on the role of schema in information processing. Like general schema theories, (Taylor & Crocker, 1981; Neisser, 1976), gender schema theory treats perception as a 'constructive process'; that

is, what is perceived is determined by the interaction between incoming information and an individual's preexisting schema.

1.1.1 Schema and Information Processing

'Schema' refer to cognitive structures within people's information processing systems. These structures organize how people process stimuli, reducing the mass of incoming information to a manageable set of data. Thus, these structures are assumed to determine what information is selected for further processing (Payne, Connor & Colletti, 1987).

Generally, schematic processing is thought to be qualitatively and quantitatively different from non-schematic processing. Schema, for example, are said to facilitate encoding and recall, particularly for information consistent with the schema. Schema are also said to increase the efficiency and speed of processing and to help perceivers fill in missing data. Schema may thus both assist and constrain perception (Taylor & Crocker, 1981).

In the past decade, a number of psychologists have examined the role of schema in processing gender-relevant information (See Payne, Connor & Colletti, 1987). Speci-

fically, they have investigated how information processing may be central to an understanding of sex-typing, the psychological process whereby humans become masculine or feminine through the acquisition of sex-appropriate personality attributes, behaviours, preferences and self-concepts.

1.1.2 Gender Schema Theory and Sex-typing

Bem (1981b, 1985), in her gender schema theory, draws explicitly on the schema approach to account for sex-typing. She posits that sex-typing derives in large measure from gender-schematic processing, that is, a generalized readiness to encode and organize information, including information about the self, according to the culture's definitions of maleness and femaleness. The emphasis is on the acquisition and application of gender schema, on process rather than content.

Bem (1981b) proposes that sex-typed individuals differ from non-sex-typed individuals on the basis of the presence of gender schema.

Sex-typed individuals are seen as differing from other individuals not primarily in terms of how much masculinity or femininity they possess but in terms of whether or not

their self-concepts and behaviours are organized on the basis of gender (Bem, 1981b, p.356).

In the following sections, Bem's propositions with respect to the acquisition and effects of gender schema are discussed. In the elaboration of these aspects of her theory, Bem (1983, 1985) draws on both cognitive developmental and social learning theories. In particular one can trace the influence of the cognitive approach of Kohlberg (1966), McConaghy (1979) and Ullian (1976, 1981) and the social learning approach of Mischel (1970), Damon (1977) and Cazden (1968).

1.1.3 The Acquisition of Gender Schema

Bem (1983) proposes that children learn their society's cultural definitions of maleness and femaleness. These definitions are comprised of a widespread network of sex-linked associations related not only to anatomy, social roles and personality attributes but also to features remotely related to sex such as angularity or roundedness. Bem (1983) further posits that the child learns to invoke this heterogeneous network of sex-related associations in order to evaluate and assimilate new information. In other words, the child learns to encode and organize information

in terms of a developing gender schema. When children learn what attributes are culturally linked with their own and the other sex, they are learning to be sex-typed. They learn that standards and dimensions are differentially applied to each sex. With cognitive development, they learn to apply schema selectively to themselves, using gender dimensions to organize the diverse and previously discrete contents of the self-concept. It is on the basis of acquired gender schema that they learn to evaluate their adequacy as people. In this way, the schema becomes an internalized motivational factor which regulates behaviour to conform to the cultural standards of maleness and femaleness. Sex-appropriate behaviour serves to reinforce the schema (Kagan, 1964; Kohlberg, 1964).

According to gender schema theory, then, differences in male and female behaviours emerge from the learned differences in males and females in their perception, evaluation and regulation of their own behaviour and that of others in accordance with cultural definitions of gender appropriateness. Thus, according to Bem (1985), cultural myths become self-fulfilling prophecies.

Drawing from cognitive developmental theory, Bem (1983, 1985) proposes that sex-typing is mediated by the child's own cognitive processing and readiness to encode

and organize information gender-schematically. Drawing on social learning theory, Bem (1983) proposes that gender-schematic processing is in part derived from the sex-differentiated practices of the community. Sex-typing then is learned and neither unmodifiable nor inevitable. Bem (1983, 1985) thus posits the possibility that some individuals will not exhibit sex-typed thinking while others will. On the basis of these differences among individuals, Bem predicts differences in cognitive processing and behaviour.

1.1.4 The Effects of Gender Schema

Gender schema are viewed as acquired cognitive structures, based on cultural notions of masculinity and femininity, which allow individuals quickly to identify, categorize and organize stimuli. In socio-linguistic terms, stimuli are indices of the underlying structure provided by the schema (Bar-Hillel, 1954). Bem (1985) contends that the schema provide general prescriptions for behaviour identifying sex-appropriate and sex-inappropriate behaviours. At the most general level, sex-typed individuals will be inclined to perceive situations, others and themselves in sex-relevant terms and, when given the choice, will behave in ways appropriate to their sex schema.

Specifically, according to Bem (1985), schematic processing is manifested in a generalized readiness to encode schematic information quickly, to organize that information into schema-relevant categories, to make highly differentiated judgements along schema-relevant dimensions and to make discriminations along these dimensions. This is the case even where other dimensions which could serve equally well exist. Schema produce systematic biases and selectivity in perceptions and actions.

Gender-schematic processing, then, involves spontaneously sorting persons, attributes and behaviours into masculine and feminine categories or 'equivalence classes' regardless of their differences on a variety of dimensions unrelated to gender - for example, spontaneously placing items like 'tender' and 'nightingale' into a feminine category and items like 'assertive' and 'eagle' into a masculine category.

Sex-typed individuals are viewed by Bem (1981b, 1983, 1985) as processing information and regulating behaviour on the basis of gender schema which in turn are based on the definitions of masculinity and femininity which the culture has provided. It is the process of dividing the world into masculine and feminine that is central to the theory. Similarly, sex-typed individuals

are seen to be different from non-sex-typed individuals on the basis of whether they organize their perceptions and behaviour along gender lines rather than on the basis of the many other dimensions available to them.

1.2 REVIEW OF THE RESEARCH

A good deal of recent empirical research supports the general hypothesis of gender schema theory, that sex-typing derives from gender-schematic processing. Specifically, a number of studies were designed to test whether: a) sex-typed individuals do in fact spontaneously engage in gender-schematic processing more than others; and b) individuals who engage in a high level of gender-schematic processing also engage in a high level of gender-stereotyped behaviour.

One series of studies examined how sex-typing is linked to information processing, specifically recall and recognition. In one such study, Bem (1981b) presented 96 undergraduate subjects with a randomly ordered sequence of words which had been previously categorized as feminine, masculine or neutral. Subjects were informed that they would be tested on recall of the words presented to them on slides. Three seconds after the final slide, subjects were given eight minutes to write all the words they could

remember of those presented to them. Bem found that sex-typed individuals were far more likely than others to recall words in clusters or sequences of feminine and masculine items. Bem took this as support that sex-typed individuals encode information in terms of sex-linked associations - gender schema. This hypothesis also received support in the findings of Kait and Levine (1976) and Liben and Signorella (1980). In both of these studies, children were shown a series of pictures of women engaged in a variety of activities. Children who had been identified as high in gender-stereotyped preferences, i.e. sex-typed children, recognized more gender-consistent pictures (e.g. women engaged in traditionally feminine activities) than gender-inconsistent pictures (e.g. women engaged in traditionally masculine activities). This was not the case for children identified as low in gender-stereotyped preferences.

A second series of studies tested the hypothesis that sex-typed individuals have a readiness to decide on the basis of gender which personal attributes are associated with or dissociated from their self-concepts. Girven (1978) set out to assess whether in fact the gender connotations of personal attributes were especially salient to sex-typed individuals: his findings support this hypothesis. A sample of 48 males and 48 females pushed a 'Me' or 'Not Me' button when looking at the 60 items of the

Bem Sex-role Inventory of personal attributes projected on a screen. Of interest was how long it took to make a decision about each attribute, that is, the subject's response latency.

Girven (1978) found that sex-typed subjects are significantly faster than non-sex-typed subjects to endorse sex-appropriate attributes and reject sex-inappropriate attributes. Moreover, when occasionally sex-typed individuals endorse a sex-inappropriate attribute or admit to lacking a sex-appropriate attribute, they are significantly slower than non-sex-typed individuals. There was no tendency for non-sex-typed individuals to differentiate in latency between masculine, feminine and neutral attributes; thus, non-sex-typed individuals are not spontaneously inclined to process information about the self in terms of gender. These findings were replicated in studies by Markus, Crane, Bernstein and Siladi (1982) and by Mills (1983). Further, the sex-typed subjects in Mills' study were significantly more likely than others to recall more of the gender-congruent attributes than the gender-incongruent attributes.

Sex-typed individuals, then, appear to be more likely than non-sex-typed individuals to organize information about themselves into masculine and feminine categories.

A number of studies have also tested whether, as predicted by gender schema theory, sex-typed individuals have a spontaneous readiness to encode information related to other or situations in terms of the sex-linked associations that make up the gender schema.

Deaux and Major (1977) found that sex-typed subjects are more likely to organize information about others on the basis of gender. Sex-typed subjects differentiated between males and females significantly more often than did non-sex-typed subjects when asked to segment each person's videotaped sequence of behaviours into units that seemed natural and meaningful for them. Similarly, Taylor and Falcone (1982) found that when asked to recall 'who said what' in a group discussion, sex-typed subjects made significantly more within-sex than cross-sex errors. In other words, they tended to confuse men with men and women with women, but did not confuse men with women as often as did non-sex-typed subjects. This suggests the overriding importance of gender differences among sex-typed individuals.

Frable and Bem (1983) attempted to refine Taylor and Falcone's (1982) findings. Forty-eight male and 48 female subjects listened to a tape recording of carefully scripted and rehearsed discussions among three males and

three females about various aspects of college life. As each person spoke on the tape, his/her photograph was projected on a screen. At the end of the slide and tape session, subjects were asked to match each statement from the tape with the appropriate photograph, that is, to recall 'who said what'. The number of errors made by each subject was not of interest. Rather, the experimenters were interested in the erroneous attribution of male statements to other males rather than to females and female statements to other females rather than to males. Sex-typed individuals were significantly more likely to confuse members of the opposite sex rather than their own. Nevertheless, they were more likely to make 'within sex' rather than 'cross-sex' errors, confirming that sex-typed individuals are spontaneously inclined to organize others into gender-equivalent classes.

Anderson and Bem (1981) also tested the hypothesis that sex-typed individuals would be highly attuned to the culture's gender-specific definitions of physical attractiveness. Anderson and Bem (1981) had sex-typed and non-sex-typed subjects engage in 'getting acquainted' telephone conversations with four different partners. The subjects were led to believe that each of their partners was physically unattractive or attractive. Each subject spoke to one allegedly attractive and one unattractive

partner of each sex. The conversations lasted eight minutes. Three independent judges who were unaware of whether the subjects' were sex-typed and of the sex and alleged attractiveness of the partners rated the subjects' half of the taped conversation on a series of dimensions.

As predicted, sex-typed individuals were significantly more likely than non-sex-typed individuals to differentiate between attractive and unattractive partners, showing more animation, enthusiasm and interest toward those represented as more attractive. This finding was especially pronounced with partners of the opposite sex. Similarly, a study by Lipka (1983) also found that when asked to select the particular body outlines they considered most attractive for a male and female, sex-typed individuals selected body outlines of the two sexes that were significantly more divergent from one another physically than those selected by non-sex-typed subjects.

Taken together, these studies support the hypothesis that sex-typed individuals are more likely than non-sex-typed individuals to encode and organize information about themselves, others and situations in terms of stereotypical definitions of gender.

A series of studies also tested whether sex-typed individuals, as predicted by gender schema

theory, are motivated to keep their behaviour consistent with the culture's definition of gender appropriateness. Bem and Lenney (1976) set out to determine whether sex-typed individuals would avoid activities that are gender-inappropriate and, if forced to perform, whether they would experience discomfort. As anticipated, the results indicated that sex-typed subjects were significantly more stereotyped in their choices than were non-sex-typed subjects.

Seventy-two subjects were told that the experimenters required photographs of the same person performing many different activities for a study they were planning. The stated purpose was to test whether people make different personality judgements about individuals based on the particular activities they are seen performing. Each subject was asked to select one of a pair of activities they wished to be photographed doing. Unknown to the subject, there were fifteen pairs that differed in gender-connotations. Of these, five were neutral versus masculine activities; five were neutral versus feminine activities; and five were feminine versus masculine activities. For each pair, the experimenters offered more payment for the gender-inappropriate choice. The experimenters also assured the subjects that they were not at all interested in how well the subjects performed

the activities in question. In other words, the experimenters attempted to remove any disincentives or barriers to choosing the sex-inappropriate activity.

The results of the study support the hypothesis that sex-typed individuals are significantly more likely than non-sex-typed individuals to choose activities consistent with their own gender and to reject gender-inappropriate activities - even when barriers are removed and their choices cost them money.

In the second part of the study, subjects were actually asked to perform neutral, masculine and feminine activities and to report on their feelings after each activity. Findings support Bem's hypothesis that sex-typed individuals feel significantly worse, more nervous and 'peculiar', after performing sex-inappropriate activities than do non-sex-typed individuals. Bem concludes that gender-inappropriate activities are problematic for sex-typed individuals; sex-typed individuals are motivated to restrict their behaviour in ways consistent with cultural definitions of gender-appropriateness.

Studies by Lippa (1978), LaFrance (1981) and LaFrance and Carmen (1980) on non-verbal or paralinguistic behaviours lend additional support.

In Lippa's (1978) study, naive judges were shown soundless videotapes of sex-typed and non-sex-typed males and females enacting identical behaviours in identical situations. As predicted, sex-typed women were rated by the judges as more feminine than non-sex-typed women and sex-typed men as more masculine than non-sex-typed men. These findings suggest that the non-verbal behaviour of sex-typed individuals is more gender-stereotyped than that of non-sex-typed individuals.

In the second study (LaFrance & Carmen, 1980), sex-typed and non-sex-typed subjects were asked to engage in dyadic interactions. Trained observers were asked to observe these interactions and to count every spontaneous occurrence of four specified paralinguistic behaviours. They were asked to count each occurrence of what were termed masculine paralinguistic behaviours (filled pauses and interruptive statements) and feminine paralinguistic behaviours (gaze while speaking and smile while not speaking). The results indicate that sex-typed subjects are significantly more likely than non-sex-typed subjects to exhibit gender-congruent behaviour and to avoid gender-incongruent behaviour (LaFrance, 1981).

The hypothesis that sex-typed individuals will prefer and feel more comfortable with sex-appropriate

behaviours was more directly tested in three separate laboratory experiments. In one of these studies (Bem, Martyna & Watson, 1976), subjects were left alone for 10 minutes with a 5-month-old baby. The subjects were told that the experimenters were interested in studying the baby's reaction to strangers and that the experimenters would be observing through a one-way mirror. In another study (Bem, Martyna & Watson, 1976), the experimenters observed the extent to which subjects elicited sympathetic or nurturant behaviour when alone with a 'lonely peer' (actually an experimental assistant or accomplice). In the third study (Bem, 1975), four males or four females were asked to rate a series of cartoons. Of interest was how subjects rated the cartoons when they were the last of the four to be called upon; that is, the experimenters were interested in measuring the independence of the subjects.

Overall, the findings of these behavioural studies support the hypothesis that sex-typed individuals avoid gender-inappropriate activity, including such complex social behaviours as nurturance and independence, and that non-sex-typed individuals demonstrate more freedom from sexual stereotypes. Furthermore, it appears that sex-typed subjects feel significantly greater discomfort than do non-sex-typed subjects if they have no choice but to perform the gender-inappropriate activity.

In sum, there is a growing body of empirical support for the hypothesis that sex-typed individuals engage in a higher level of gender-schematic processing and gender-stereotyped behaviour than do non-sex-typed individuals. Nevertheless, recent replication studies (Payne, Connor & Colletti, 1987; Baldwin, Stevens, Critelli & Russell, 1986) and critical assessments of the theory (Taylor & Hall, 1982; Markus, Crane, Bernstein & Siladi, 1982; Spence & Helmreich, 1981) raise a number of questions which are addressed in the following section.

1.3. CRITICAL OVERVIEW

Two major theoretical issues with respect to gender schema theory have emerged: the adequacy of Bem's conceptual distinction between sex-typed and non-sex-typed individuals; and the range or scope of applicability of gender schema theory.

1.3.1 Sex-typed Versus Non-sex-typed

Bem initially focussed on androgynous individuals and how they differ from others (Bem & Lenney, 1976; Bem, Martyna & Watson, 1976). Androgynous individuals, because they call upon both traditionally feminine and traditionally masculine attributes in defining themselves,

are free of the constraining effects of either masculine or feminine schema. They are, in Bem's terms, balanced in both masculinity and femininity. In contrast, Bem defined sex-typed individuals as high in either masculinity or femininity. With the evolution of gender schema theory Bem (1981b, 1983, 1985) came to recognize that the important distinction was not between androgynous and sex-typed but between sex-typed and non-sex-typed. She came to focus on the behaviour and perceptions of the sex-typed rather than androgynous individual.

With the change in focus came a change in definition. As indicated, Bem (1981b, 1983, 1985) defines an individual as sex-typed if that individual perceives and describes himself or herself in terms of culturally stereotyped, gender-appropriate attributes. Thus a woman who perceives herself as feminine in culturally stereotyped terms and a man who perceives himself as masculine in culturally stereotyped terms are sex-typed. Non-sex-typed individuals are in effect defined in terms of the absence of such culturally stereotyped and gender-appropriate self-definitions.

There are, then, two necessary components to Bem's definition: gender-appropriateness and culturally stereotyped content. Both of these elements have been

criticized as being restrictive and as, therefore, limiting the applicability of gender schema theory.

1.3.1.a Gender-appropriateness

Markus et al. (1982) and more recently Payne et al. (1987) have questioned Bem's (1981b, 1983, 1985) definition of sex-typed and non-sex-typed individuals. They argue, that sex-type should be defined solely in terms of whether one has gender schema, irrespective of sex. Bem's emphasis on gender-appropriateness demands that sex be considered in distinguishing sex-typed and non-sex-typed individuals. Thus, for example, a man who defines himself as feminine (or a woman who defines herself as masculine) in culturally stereotyped terms is described by Bem (1981b, 1983, 1985) as cross-sex-typed, somehow different from other sex-typed individuals. These cross-sex-typed individuals, in Bem's terms, would be sex-typed according to Markus et al. (1982). To put this in other terms, Markus et al. do not consider gender-appropriateness in their definition of sex-type. Rather, they ask simply whether individuals employ gender schema, irrespective of whether the schema are appropriate to their gender.

The question is whether consideration of gender-appropriateness is a fruitful basis for distinguishing

between sex-typed and non-sex-typed individuals. The empirical findings on cross-sex-typed individuals are equivocal. In some studies, cross-sex-typed individuals were found to respond to test situations in ways similar to other sex-typed subjects (Taylor & Falcone, 1982). In fact, in some cases, they appeared to be particularly sex-typed. For example, in the Frable & Bem (1983) study, cross-sex-typed subjects were even more likely than sex-typed subjects to confuse members of the opposite sex with one another, suggesting that cross-sex-typed individuals may have a particular readiness to organize information about other people on the basis of gender. Bem (1985) speculates that because cross-sex-typed individuals have a history of gender deviance, they may be gender-schematic in a way different from other sex-typed individuals.

Yet in other studies (Bem & Lenney, 1976; Bem, Martyna & Watson, 1976; Bem 1975), the results for cross-sex-typed individuals were opposite to those of the sex-typed individuals. For example, Himelfarb (1981) in her study of achievement motivation in neutral and arousal situations concluded that cross-sex-typed females were different from both sex-typed males and females. In Girven's (1978) study, the results on cross-sex-typed individuals were mixed; that is, in some cases their

responses to the test situations were like the sex-typed and in others like the non-sex-typed individuals. Bem (1985) has concluded that gender schema theory can make no predictions for cross-sex-typed individuals. Nevertheless, the findings, while inconsistent, do support Bem's view that gender-appropriateness is important and that cross-sex-typed individuals should be distinguished from other sex-typed individuals.

1.3.1.b Gender Schema Versus Self Schema

A second major debate revolves around Bem's (1981b) definition of gender schema on the basis of cultural rather than personal definitions of masculinity and femininity. Markus et al. (1982) have argued that self schema theory provides a more comprehensive approach than does gender schema theory. They argue that the question is not simply whether one employs culturally derived gender schema, but rather whether one thinks of oneself in gender terms at all. Similarly, Baldwin et al. (1986) have suggested the potential fruitfulness of examining personal constructs of masculinity and femininity rather than culturally-derived schema. In comparing the self schema theory of Markus et al. (1982) and Bem's gender schema theory, Payne et al. (1987) have concluded that Bem's approach is too restrictive, that it may be more fruitful to examine the

effects of gender-schematic thinking irrespective of whether the schema are culturally-derived.

On this basis, Markus et al. (1982) and Payne et al. (1987) have questioned whether Bem's non-sex-typed category is internally consistent because as they interpret it, the category includes individuals who possess both masculine and feminine schema (androgynous) and those who possess neither (undifferentiated). The latter, they argue, is the only true category of non-sex-typed or non-schematic individuals. Bem (1985) has argued that, for her purposes, what is important is that neither the androgynous nor the undifferentiated organize their self-concept and behaviour in culturally stereotyped, gender-appropriate terms. They are neither stereotypically feminine nor stereotypically masculine. While some may be operating on the basis of personal gender schema, they do not employ culturally-derived schema.

Markus et al. (1982) predict perceptions and behaviours based on the personal schema of their subjects. Thus, for example, they focus on the differences between androgynous and undifferentiated individuals and between masculine and feminine individuals. There is some empirical support for this emphasis. In a conceptual replication of the Bem and Lenney (1976) study, Helmreich,

Spence and Holahan (1979), using a substantially different experimental procedure, found that sex-typed subjects are significantly more likely than others to prefer gender-appropriate activities. In their findings, however, this was the case only for masculine males; not feminine females. Why this was the case is not known but this does raise questions about the differences, particularly with respect to motivation, between masculine and feminine sex-typed subjects.

In a re-analysis of her own data, Bem (1985) found a significant sex by sex-type interaction in each of the studies: the difference between males and females was significantly greater among sex-typed than among non-sex-typed individuals. Bem concludes that gender schematicity is itself responsible for creating and/or enhancing the apparent sex differences often observed in contemporary society. In social terms, sex-typed males and sex-typed females act consistently with and, therefore, confirm cultural stereotypes of the differences between the sexes. Her interest is in the similarities rather than the differences among sex-typed individuals, whether masculine or feminine, and she defines these similarities in terms of vulnerability to cultural stereotypes.

Bem (1981) has acknowledged self schema theory as a legitimate alternative but emphasizes that her theory is concerned with process, not content and specifically with investigating the process of acquiring and applying culturally derived gender schema. Payne et al. (1987) suggest that Bem's approach is restrictive but may be most appropriate for the examination of perceptions and behaviour in sex-stereotyped situations, that is, in situations where cultural stereotypes can be presumed to play a role. Similarly, Baldwin et al. (1986, p. 1087) conclude that gender schema theory may be particularly useful in studying "certain culturally defined aspects of masculinity and femininity" and the effects of sex-role stereotyping. For example, gender schema theory may be particularly appropriate for examining the effects of sex-role congruence in an occupational setting because, as Kalin and Hodgins (1984) suggest, cultural stereotypes of masculinity and femininity continue to influence occupational behaviour and perceptions. Similarly, Simpson, McCarrey and Edwards (1987), in their study of the effects of sex-role stereotypes on performance evaluations of men and women in non-traditional jobs, found that women in sex-incongruent jobs face subtle discrimination. They conclude that this discrimination reflects the impact of culturally-based gender stereotypes in the workplace. These issues become increasingly important and prevalent

as women enter non-traditional or sex-incongruent occupations. This has been the case, for example, in policing in Canada. Thus, gender schema theory may be usefully applied to an examination of perception and behaviour with respect to sex-congruence in one occupational context, a police training situation.

1.3.2. The Applicability of Gender Schema Theory

Despite the apparent potential of gender schema theory for studying aspects of sex-stereotyping in the occupational setting, gender schema theory has typically, though not exclusively, been tested in laboratory experiments with undergraduates, under conditions where relatively simple and easily quantifiable dependent variables are specified: speed (or spontaneity) of response, type of error in recall, answers to forced-choice questions, etc. In the few experiments with some complex forms of behaviour specified as dependent variables (eg. instrumental versus expressive), results have been generally supportive, though as mentioned previously, less consistent.

For the most part, the literature on the effects of sex-typing in the natural setting has been speculative. Most researchers agree that sex and sex stereotyping are

generally salient in contemporary society, particularly in social situations in which women are in the minority, and this sex saliency will be particularly consequential for sex-typed individuals (Porter, Geis, Cooper & Newman, 1984; McGuire, McGuire & Winton, 1979; Jones, Chernovetz & Hansson, 1978; McGuire, McGuire, Child & Fujioka, 1978).

A number of theorists have suggested, for example, that non-sex-typed or cross-sex-typed women will modify their performance in sex-incongruent situations in anticipation of the negative consequences of success (e.g., Hoffman, 1974; Horner, 1970; 1971; Rosenkrantz, Bee, Vogel & Broverman, 1968). Costrich, Feinstein, Kidder, Marecek and Pascale (1975) demonstrated that women's anticipation of negative consequences for sex-incongruent behaviour reflects accurate perceptions of others' judgements. Presumably, non-sex-typed women will less likely think of situations or their performance as sex-incongruent because they do not think gender schematically. They do not distinguish between sex-congruent and sex-incongruent behaviours.

The constraining effects of cultural stereotypes may be aggravated when women are actually in the minority in a specific situation. Kantor (1976), for example, has suggested that when women are a minority in any group, they

experience far greater pressure to conform to cultural stereotypes. It has been found that when women are in a minority situation, they are more likely to mention their gender (Spence & Helmreich, 1981). In fact, Bem (1985) speculates that even the non-sex-typed woman in a male-dominated profession will be more likely spontaneously to mention her sex in self-description, not because her self-concept is organized around culturally-derived gender schema, but rather because of her awareness of her minority status. She writes:

Consider, for example, the androgynous woman in a male-dominated profession. Neither her behaviour nor her self-concept is likely to be organized on the basis of society's gender schema, but her status as a solo woman is likely to make the fact that she is female highly salient both to her and to others. It is also likely to prompt her to mention her sex spontaneously in self-description (p. 370).

But, because she is non-schematic, the non-sex-typed female should be less vulnerable to the cultural stereotypes of femininity in her perceptions and behaviour. Porter, et al. (1984) indicate that non-sex-

typed women will avoid stereotypically feminine behaviour, particularly when they can draw upon the support of other women. It is not clear from their work, however, whether non-sex-typed women are intentionally avoiding stereotypically feminine behaviour or are not exhibiting such stereotypical behaviour because they do not employ culturally-derived gender schema. In either case, the implication is that non-sex-typed women react differently from sex-typed women to externally induced sex-saliency. However, the differential impact of sex-saliency in the natural setting on sex-typed and non-sex-typed men and women has not been subjected to systematic investigation.

Gender schema theory appears particularly suited to help account for differences in perception and behaviour in social situations in which sex and sex stereotypes are salient. Nevertheless, predictions derived from gender schema theory have not been tested in the natural setting. The police training situation provides an excellent setting for testing the applicability of gender schema theory to the natural setting. Current research on policing and police training is described in the following section.

1.4 GENDER SCHEMA THEORY AND POLICING

Police research over the past decade has increasingly focussed attention on the issue of women in

policing. For the most part, the research has focussed on questions of policy and administration (e.g., Gaines, 1984; Van Wormer, 1981; Pownall, 1978). The major questions have been:

1. Should women be encouraged to enter policing?
2. Do gender differences require differential selection, training and placement of male and female recruits?
3. Are there major performance differences between male and female officers? and
4. Are purported differences consequential for effective policing?

As Horne (1980) suggests, little of this research has been designed to test theoretically derived hypotheses. The findings of these studies have not been cumulative and to a large extent are contradictory. To the extent that there is any convergence in theoretical orientation in this growing literature, it would appear to be an increasing focus on sex-role typing and sex-role identity (Wexler & Quinn, 1985).

In summarizing this literature, Bell (1982) draws six generalizations:

1. Women have not usually been accepted as full officers;
2. Women are more interested in helping people than in security concerns;
3. Critics have tended to perceive the emphasis on helping as weakness;
4. Women have a calming effect in some situations;
5. Policewomen perform reasonably well; and
6. The main obstacle for women entering the police profession remains lack of acceptance from within.

In sum, police research appears to show that policemen and policewomen perceive policing differently and use different styles of performance (Van Wormer, 1981; Heffner, 1976). Further, the so-called 'female approach' is negatively valued within the traditionally male police community (Homant & Kennedy, 1984; Sterling & Owen, 1982; Townsey, 1980; Martin, 1979).

At the same time, several researchers have concluded that there are no measurable performance differences between male and female officers, or that

differences can be accounted for in terms of discrimination or the particular organizational or interpersonal obstacles in the path of female officers (e.g., Wexler & Quinn, 1985; Bell, 1978; Pownall, 1978). Several studies have suggested that observed performance differences can be attributed to factors other than sex-role identity, generally to socio-demographic characteristics of male and female recruits (Wexler & Quinn, 1985; Rutland, 1978; Heffner, 1976).

Apart from the absence of a theoretical base, a problem shared by most of these studies has been the methodological equation between gender and sex-type. The studies which find differences based on gender typically infer sex-type differences as their explanatory variable. Other studies infer or measure other differences such as educational background in refuting these explanations (Homant & Kennedy, 1984; Heffner, 1976). Still others, which find no differences, infer from this that sex-type differences are minor if existent (Armat, 1975). This latter argument is supported by evidence that female recruits are not representative of the female population, that they are more likely than other women to be masculine (Lester, Groman & Wondrack, 1982). In other words, the assumption that an individual's sex-type can be predicted on the basis of gender is always problematic and particularly so among police officers.

Charles (1978), for example, focussed on sex-role perceptions among police recruits and the effects of these perceptions on performance and evaluations of performance among peers. His independent variable was sex. He found differences as predicted in sex-role perceptions between men and women, though the findings on performance were problematic. He also found that role-perceptions remained relatively stable over the course of recruit training. Charles also observed dramatic intrasex differences in role perception. Some women believed that their gender was not a handicap in performing traditionally male tasks involving strength and aggression; these women in fact performed better than others of their sex. Charles argues from this that their sex-role perceptions were a consequence of their successful performance. He fails to examine the possibility, drawn from gender schema theory, that these women were non-sex-typed and, therefore, that their performance was not influenced by gender schema. In other words, gender schema theory might be useful in explaining the anomolous results in Charles' study (See Bem, 1983).

Adler-Russell (1983) found that policing situations were typically sex-typed by police officers: social service police work was perceived as feminine and law enforcement work as masculine. She found that police officers were evaluated on the basis of their sex and the

sex-typing of the situation, that is, on the basis of sex-congruence. Unfortunately, because she examined only the sex-type of situations rather than of individuals, she did not explore individual differences in readiness to perceive and participate in sex-typed situations.

Within-sex differences are given somewhat more attention in the police training literature. Particularly instructive is Wexler and Quinn's (1985) study on the perceived training needs of men and women eligible to be sergeants. They found substantial similarities between men and women. Nevertheless, they also found significant differences in self-perceptions and expectations. Unlike previous studies reviewed, however, they found that there exist sharp differences among women in how important they view gender to be and that these differences in turn are consequential. Drawing on the work of Chacko (1982) on women in other organizational settings, Wexler and Quinn write:

Women who believe their gender to be an important factor in their hiring have been found to have significantly less organizational commitment and overall satisfaction and significantly more role conflict and ambiguity than did those who believed their hiring was based on ability. (1985, p. 99).

Such within-sex differences have been identified using a variety of methods but they have not been systematically documented nor systematically linked to differences in behaviour and performance. As indicated, the research has, for the most part, been descriptive and has focussed on practical and policy implications, specifically, what hiring and recruitment practices, training programs and organizational supports might reduce the importance of gender (e.g., Gaines, 1984; Van Wormer, 1981; Armat, 1981; Washington, 1975).

An important exception to this emphasis has been the work of Horne (1980) who has suggested that policing must not reduce the importance of gender so much as accommodate more femininity as it moves increasingly to an emphasis on the prevention of crime. Perlstein (1972) has similarly suggested that policewomen may be the 'ideal choice' for preventive policing and citizen assistance units. While Perlstein's view is itself sex-typed in that it defines the appropriate role for policewomen in cultural stereotyped terms, Horne moves beyond such an approach. He argues that policewomen have been shown to be capable in both the punitive and preventive areas of policing. Perhaps more important in terms of the present study, he writes:

While policing will probably be defined in the foreseeable future by many more male characteristics than female ones, I feel that female officers who are equally utilized by police departments will move policing toward a new definition of who and what police officers are. But perhaps what we will see in the future is the 'androgynous police officer' who will have the best characteristics of both sexes (1980, p. 205).

In sum, a good deal of the research on policing and police training has explored the effect of sex-role and sex-role identity on perceptions and behaviour and on the organization of policing more generally. This research however, has for the most part been atheoretical.

In the following section, the relevant aspects of Bem's gender schema theory are briefly summarized and the research problem and hypotheses to be tested in the police training situation are specified.

1.5 SUMMARY AND STATEMENT OF THE PROBLEM

According to Bem (1985), sex-typed individuals use gender to organize and process information. Sex-typed

individuals are gender-schematic and this is reflected in their processing of information related to the self-concept; in their processing of information related to other people; and in their performance of gender-congruent and gender-incongruent behaviour. Gender is more salient in the perceptions and behaviours of sex-typed individuals. In the terms of Kalin and Hodgins (1984), sex-typed individuals are more likely than non-sex-typed individuals to perceive behaviour as sex-congruent or sex-incongruent, to judge sex-congruence more positively than sex-incongruence (Simpson et al. 1987), to feel more comfortable with sex-congruent behaviour, to avoid sex-incongruent behaviour and therefore to perform better in sex-congruent situations.

The research supporting these general hypotheses has almost exclusively been confined to studies in the laboratory. The potential of gender schema theory for examining sex-bias based on sex-congruence in the natural setting has not yet been explored. This is particularly important for testing the applicability of gender schema theory in situations of externally-induced gender-saliency.

This study, then, will assess the level of gender-schematic thinking of recruits in a police training situation. Specifically, the study will explore the

different levels of gender-saliency between sex-typed and non-sex-typed individuals in their perceptions of sex differences and in their self-assessments in the police situation. Further, the study will examine the relationship between gender-schematic thinking and performance in test situations traditionally defined as masculine, feminine or mixed (masculine and feminine). The problem, then, can be stated as follows:

What is the effect of gender-schematic thinking on perceptions of self and others, and on the performance of male and female recruits in masculine, feminine and mixed (masculine and feminine) police training situations?

1.6 HYPOTHESES

1.6.1 Perception: Gender Stereotypic Expectations

The following hypotheses test Bem's (1985) proposition that sex-typed individuals assess others' performances on the basis of culturally-defined sex-congruence, judging females as more able in feminine situations and males as more able in masculine situations.

Non-sex-typed individuals do not assess others' performance on the basis of sex-congruence.

HA₁ Sex-typed recruits (masculine males and feminine females) will report that men are more able than women in the use of firearms whereas non-sex-typed recruits will not differentiate along this dimension.

HA₂ Sex-typed recruits (masculine males and feminine females) will report that women are more able than men in interviewing whereas non-sex-typed recruits will not differentiate along this dimension.

1.6.2 Self-assessment: Sex-congruent Versus Sex-incongruent

The following hypothesis tests Bem's (1985) assertion that sex-typed individuals assess themselves on the basis of the sex-congruence of the situation whereas non-sex-typed individuals do not.

HB The self-assessments of sex-typed individuals will be higher with respect to sex-congruent situations than sex-incongruent situations whereas sex-congruence will not affect the self-assessments of non-sex-typed individuals.

- a. Sex-typed (masculine) male recruits will report more positive self-assessments in the use of firearms than in interviewing whereas non-sex-typed male recruits will not discriminate along this dimension.
- b. Sex-typed (feminine) female recruits will report more positive self-assessments in interviewing than in the use of firearms whereas non-sex-typed female recruits will not differentiate along this dimension.

1.6.3 Performance: Sex-congruent Versus Sex-incongruent

The following hypotheses test Bem's (1985) proposition that sex-typed individuals perform sex-congruent behaviours more successfully than they perform sex-incongruent behaviours. This is the case, she argues, because sex-typed individuals find sex-incongruent behaviour motivationally problematic. That is, they actively avoid behaviour which they perceive to be sex-incongruent and feel discomfort when forced to engage in such behaviour.

HC₁ The performance scores of sex-typed individuals will be higher in sex-congruent than in sex-incongruent situations whereas sex-congruence will not affect the performance scores of non-sex-typed individuals.

- a. Sex-typed (masculine) males will perform better in the masculine situation (use of firearms) than in the feminine situation (tests of their knowledge of interviewing) to a greater extent than will non-sex-typed males.
- b. Sex-typed (feminine) females will perform better in the feminine situation (tests of their knowledge of interviewing) than in the masculine situation (use of firearms) to a greater extent than will non-sex-typed females.

HC₂ The performance scores of sex-typed individuals will be higher in sex-congruent than in mixed situations whereas sex-congruence will not affect the performance scores of non-sex-typed individuals.

- a. Sex-typed (masculine) males will perform better in the masculine situation (use of firearms) than in the mixed situation (tests of their knowledge of crisis intervention) to a greater extent than will non-sex-typed males.

- b. Sex-typed (feminine) females will perform better in the feminine situation (tests of their knowledge of interviewing) than in the mixed situation (tests of their knowledge of crisis intervention) to a greater extent than will non-sex-typed females.

CHAPTER 2

EXPERIMENTAL DESIGN

A study was conducted to determine the effect of gender-schematic thinking on perceptions of self and others and on performance in masculine, feminine and mixed (masculine and feminine) police training situations. The design of the study is outlined in this chapter.

2.1 RESEARCH SUBJECTS

The utility of the gender schema paradigm has not been explored in the natural setting. One of the purposes of this study, then, is to test the applicability of the theory to a real world situation, in this case policing. The police recruit population was considered particularly interesting since much current research in police training has been based on sex-typing, in response to the increasing number of women entering a traditionally male profession. The Royal Canadian Mounted Police (R.C.M.P.) recruit training program is open to both men and women and therefore provides a good source of subjects of both sexes who could be tested for gender-schematic thinking.

Permission was obtained from the R.C.M.P. to test three female troops and three male troops, each usually consisting of 32 individuals. In this case, three of the troops in fact included thirty-two recruits, one female troop included 31 and two male troops included 22 and 24 recruits respectively. Thus, the sample included 173 recruits. Of these, 13 resigned, two were backsquaded, that is they will complete training with another troop, and one converted from a regular member to a special constable, leaving 157 recruits. Another six subjects were eliminated from the final sample because of incomplete or faulty data. The final sample, then, consisted of 152 recruits, 86 females and 66 males.

All recruits were trained at Depot, the Recruit Training Centre in Regina, from May 1986 to March 1987. The R.C.M.P. provides academic and skills training to its male and female recruits separately over a six month period. They stagger the entry of each troop by a week or two, but each troop is trained for the same length of time, that is, six months.

Each recruit was asked to sign a letter of agreement to participate in the study. Candidates were assured that results would be reported after being aggre-

gated and would not be reflected on their individual files. The exact nature of the study was not disclosed to avoid biasing the results; however, candidates were assured that a full explanation of the study and its findings would be provided upon completion. A copy of the letter is included in Appendix A.

2.2 SEX-ROLE STEREOTYPIC SITUATIONS

In order to assess the applicability of Bem's gender schema theory with respect to preference of sex-typed individuals for sex-appropriate situations, sex-role stereotypic situations within the police training situation had to be identified.

The often conflicting police literature has pointed out sharp performance differences between males and females in concrete police situations which arguably can themselves be sex-typed (Gaines, 1984; Adler-Russell, 1983). The police literature implies a categorization of police activities entirely consistent with Bem's distinction, drawing on Bakan's (1966) theoretical work, between

communal and agentic situations. The terms 'agency' and 'communion' are elaborated by Bakan (1966) in his discussion of sexuality.

Agency is described as the positively-valued fundamental modality of masculinity. Masculinity is conceived of as a supraordinate trait comprised of subtraits which reflect a sense of agency. Such traits as 'competitive', 'ambitious', 'independent' and 'decisive' would be included in the masculine classification. These traits would be manifested in 'self-protection', 'self-assertion', and 'self-expansion'. In Bakan's (1966) terms, agency is manifested in the formation of separation. Agency is, therefore, concerned with the organism as an individual.

Communion is described as the positively-valued fundamental modality of femininity. Classed under the supraordinate trait of femininity would be such subtraits as 'expressive', 'gentle', 'concerned', 'considerate', that is, traits reflective of a sense of communion. These traits would be manifested in a sense of being at one with other organisms. Communion, according to Bakan, is descriptive of the individual organism as it exists in some larger organism of which it is a part.

The R.C.M.P. training program is based on the concept of training to need; that is, each course is based on a task analysis of police duties and practice. On the basis of the task analysis, a Course Training Standard is developed specifying training objectives, content coverage and criterion tests. On the basis of the distinction between communal and agentic domains, a content analysis of the Basic Recruit Training Course was conducted.

Three training areas were selected, one feminine (communal), one masculine (agentic) and one mixed (communal/agentic). Specifically, interviewing was categorized as feminine as it demands sensibility and related interpersonal skills. It is important to note that in the training situation interviewing, as distinct from interrogation, emphasizes knowledge and practice of transactional analysis, communication and listening skills. As described in the formal Basic Recruit Training Course Training Standard of the R.C.M.P., training in interviewing is intended to provide recruits with knowledge on "effective ways of observing, listening and responding to others for the purpose of identifying the cause of problems and reducing tensions" (R.C.M.P., 1987). Candidates are tested on their knowledge of specific content including: empathy; creating a supportive climate; interviewing and listening techniques; and specific techniques for interviewing child abuse victims.

The use of firearms was categorized as masculine as it calls for such agentic traits as self-protection, self-assertion and decisiveness. Candidates are tested on the speed and accuracy of their use of various firearms under different conditions.

In the training situation, instruction focusses on the provision of knowledge of and practice in intervention and defusion in crisis situations (R.C.M.P., 1987). Crisis intervention which involves, for example, intervention in family disputes and dealing with victims was categorized as 'mixed' as it appears to demand a combination of agentic and communal skills and sensibilities calling for both assertiveness and control on the one hand and sensitivity and empathy on the other. Candidates are tested on their knowledge of specific content including: assertiveness techniques; leadership techniques; procedures for gaining and maintaining control; safety procedures; information gathering; non-verbal behaviour, techniques of tension reduction and conflict resolution and communication.

The identification of the three situations allows the test of the effects of sex-type of performers on the perception of their own and others' performances in sex-role-congruent situations as well as their actual performance in those situations.

2.3 MEASURING INSTRUMENTS

2.3.1 The Bem Sex-role Inventory

In order to test the hypotheses of this study adequately, a measure designed to differentiate between sex-typed and non-sex-typed individuals was needed. The Bem Sex-role Inventory (BSRI) is such a measure. When the BSRI was originally constructed (Bem, 1974), gender schema theory had not yet been fully developed. Nevertheless, the instrument was designed based on two theoretical assumptions that are consistent with gender schema theory. First is the assumption that over time the culture has clustered a somewhat heterogeneous collection of personality attributes into two mutually exclusive categories, each considered by the culture to be more desirable for one or the other sex. These cultural expectations and prescriptions are well known to most members of the culture. The content of the categories then is cultural rather than individual.

The second underlying assumption of the BSRI is that individuals use these cultural definitions of gender appropriateness to varying degrees as idealized standards of masculinity and femininity against which to evaluate their own personality and behaviour. It is not the

content, then, of these categories, but the process of using them in assessing oneself and others that the BSRI is intended to tap.

Following directly from these assumptions, the BSRI was originally designed to distinguish between those individuals who cluster the attributes on the BSRI into the two categories designated by culture as more desirable for one or the other of the two sexes (sex-typed masculine and feminine) and those who do not (androgynous).

Previous psychological instruments for assessing masculinity and femininity (eg., M-F Scale of California Psychological Inventory, Gough, 1964) assumed that individuals were either masculine or feminine, being classified on a bipolar continuum as like either the typical male or the typical female. Unlike these masculinity-femininity scales, the BSRI allows masculinity and femininity to be measured as separate dimensions present in varying degrees in both men and women.

The method of assessment is self-rating. Subjects rate themselves on two series of items, one shown to be culturally associated with masculinity and the other, with femininity. Each of these scales consists of 20 personality characteristics.

Moreover, a Social Desirability Scale, consisting of an additional 20 sex-role neutral items, provides a neutral context for the Masculinity and Femininity Scales.

The method of item selection for each of these scales was based on the assumption that sex-typed individuals are highly attuned to conform to the cultural definitions of sex-appropriate behaviour. Accordingly, items for the BSRI were selected not on the basis of sex differences in self-report as in most previous masculinity-femininity inventories, but on the basis of the ratings of samples of male and female students who judged the culturally defined desirability of the various attributes for each of the two sexes.

Four hundred personality characteristics were included in the initial pool of items. Of these, 200 were deemed by Bem and several students to be both positive in value and masculine or feminine in tone (Bem, 1974). An additional 200 'neutral' characteristics, half of which were considered positive in value and half negative, were included in the pool to ensure that the inventory would not simply be tapping a general tendency to endorse socially desirable traits.

These characteristics were rated for desirability for either man or woman on a scale of 1-7 by four independent samples of judges, two male and two female. No judge was asked to rate both.

A personality characteristic was defined as masculine or feminine and thus eligible for the Masculinity or Femininity Scales of the BSRI if it was judged to be significantly more desirable in North America for one sex than the other by all four samples of judges.

A personality characteristic qualified as neutral and thus eligible for the Social Desirability Scale if it was independently judged by both males and females to be no more desirable for one sex than the other and if male and female judges did not differ significantly in their overall desirability judgment of that trait.

2.3.1.a Scoring Procedures

When writing the BSRI, subjects rate themselves on a scale of one (never or almost never true) to seven (always or almost always true) on 20 masculine, 20 feminine and 20 neutral personality traits, which are interspersed in the one test sheet. The instructions and BSRI test are presented in Appendix B.

The masculinity and femininity scores of a subject are the mean self-rating for all endorsed masculine and feminine items respectively. Both can range from 1-7. The two scores are independently calculated.

The original scoring system of the BSRI (1974) focussed on the concept of androgyny and defined the androgyny index essentially as a measure of balance of masculine and feminine characteristics. The measure was obtained by calculating an individual's t-ratio for the difference between his/her standardized scores on the masculinity and femininity scales. Small t-ratios indicated androgyny while large t-ratios indicated sex-typing.¹ This scoring system distinguished three sex-type groups, sex-typed, cross-sexed and androgynous.

1. Bem provided data which seriously challenge the validity of the bipolar M-F scales traditionally used. Bipolarity implies that the masculine traits defining one end-point of the continuum are opposite to the feminine traits at the other and the possession of these traits, therefore, should be negatively correlated. However, Bem found 34 per cent of her male and 27 per cent of her female population to possess a balance of both masculine and feminine traits. Similarly, Spence (1974) in constructing the Personality Attributes Questionnaire (PAQ), a second test based on a dual conceptualization of personality, reported a positive correlation between the possession of a high degree of masculinity and a high degree of femininity. In addition to providing reason to question bipolar scales, these findings provide support for Bakan's and Bem's conceptualization of Androgyny.

Bem (1976) subsequently revised her scoring system as a result of findings reported by Spence, Helmreich and Stapp (1975). Spence et al. noted that Bem's conception of balance would include in the androgynous category individuals low in both masculinity and femininity, as well as those high in both, since in either case, the difference between the masculinity and femininity scores would be small. Spence, therefore, divided Bem's androgynous category into two groups, high masculine-high feminine and low masculine-low feminine. Spence's findings on self-esteem indicated that a low degree of both masculinity and femininity was the least desirable state of affairs and, therefore, would result in the least situationally-appropriate behaviour. Accordingly, Spence argued that androgyny be defined as the possession of a high degree of both masculinity and femininity.

Bem's replication studies (1976) led her to accept Spence's distinction between androgynous individuals and undifferentiated individuals. Accordingly, Bem revised her scoring system (1976) to differentiate between masculine, feminine, androgynous and undifferentiated people.

The current procedure, then, divides subjects on the basis of a median split on both the masculine and feminine dimensions. Thus four distinct groups of

individuals are differentiated, sex-typed (above-below) cross-sexed (below-above), androgynous (above-above) and undifferentiated (below-below). The system has been schematically represented in Figure 1:

FIGURE 1

Schema for Scoring BSRI

		Masculinity Score	
		Above Median	Below Median
Femininity Score	Above Median	Androgynous	Feminine
	Below Median	Masculine	Undifferentiated

Bem (1981a) recommends that subjects be classified on the basis of medians based on normative data on Stanford students (combined sex). These medians were used in the current study to allow for comparability and generalizability.

2.3.1.b Psychometric Analysis

Bem reports a psychometric analysis performed on two samples of Introductory Psychology students at Stanford

University. The first sample consisted of 279 females and 444 males who filled out the BSRI in 1973 and the second of 340 females and 476 males who did so in 1978.

2.3.1.b.i Internal Consistency

The internal consistency of the BSRI was estimated by Bem by computing the alpha coefficient separately for males and females in both samples for the Masculinity and Femininity scores and the Femininity minus-Masculinity Difference score. Table I shows that all three scores were highly reliable.

TABLE I

**Coefficient Alpha for the Femininity Score,
the Masculinity Score, and the Difference Score
of the BSRI**

	Femininity (F)		Masculinity(M)		F minus M Difference	
	Female	Male	Female	Male	Female	Male
Stanford 1973	.75	.78	.87	.86	.78	.84
Stanford 1978	.78	.78	.86	.87	.82	.82

2.3.1.b.ii Relationships Between Masculinity and Femininity

Masculinity and Femininity Scores of the BSRI are theoretically independent. Bems' analysis showed that they are empirically independent as well, supporting the methodology that treats masculinity and femininity as independent scales. Table II presents Bem's findings.

TABLE II
Correlation Between Femininity and Masculinity
Scores for Two Samples of Undergraduates

Female		Male	
1973 N = 279	1978 N = 340	1973 N = 444	1978 N = 476
-.14	.00	.11	-.05

2.3.1.b.iii Test-Retest Reliability

Twenty-eight males and twenty-eight females of the 1973 Stanford sample were retested four weeks after the first test. For the retest, subjects were instructed to avoid trying to recollect or reconstruct their initial responses. Product-moment correlations were computed and all scores proved highly reliable, as indicated in Table III.

TABLE III

**Test-Retest Reliabilities for the Femininity,
Masculinity, and F Minus M Difference Scores**

	Female	Male
Femininity	.82	.89
Masculinity	.94	.76
F-M	.88	.86

2.3.1.b.iv Social Desirability Response Set

To check the relationship between social desirability response set and an individual's scores on the BSRI, Bem administered the Marlowe-Crowne Social Desirability Scale to the 1973 test-retest sample. The product moment correlations between the Marlowe-Crowne scale and individual scores on the Femininity scale, Masculinity scale, and the Femininity-Masculinity Difference score were quite low indicating that BSRI scores do not measure a general tendency to describe oneself in socially desirable terms. Table IV presents Bem's findings.

TABLE IV

**Correlation of Femininity, Masculinity, and Difference
Scores with the Marlowe-Crowne Social Desirability Scale**

	Females	Males
Femininity	.03	.04
Masculinity	.21	.02
F-M Difference	-.15	.02

As Bem (1981a) has indicated, the structure of the BSRI itself can be said to control for the problem of social desirability because what an individual considers to be socially desirable will be mediated by whether or not they are sex-typed. What is socially desirable to a masculine male may not be the same as what is socially desirable to an androgynous individual.

2.3.1.c Validity

The previous subsection reported that the BSRI has a high degree of test-retest reliability and is internally consistent. The validity of the measure will now be examined. Does the BSRI discriminate between those individuals who organize their perceptions and restrict their behaviour in accordance with sex stereotypes and those who do not?

Although Spence and Helmreich (1981) questioned the stability of global measures of masculinity and femininity, Bem (1979) has replicated the initial process of selecting attributes for inclusion in the BSRI and found that the attributes originally selected tap relatively enduring definitions, that the cultural stereotypes or standards of sex-appropriate behaviour have not been radically transformed despite the feminist revolution. In an

independent study, Walkup and Abbott (1978) support that this is in fact the case. The inventory of attributes, then, remains valid.

Bem (1977), using the BSRI, has shown that gender connotations are more cognitively available to sex-typed than to non-sex-typed individuals. She has also shown that the speed with which subjects decide whether an attribute is relevant to the self is determined by whether or not subjects are sex-typed (Bem, 1983). Further, she has demonstrated a relationship between sex-typing and information processing (Bem, 1985).

Further, as measured by the BSPI, sex-typed subjects have been shown to be significantly more likely than androgynous or cross-sex-typed subjects to prefer sex-appropriate activity and to resist sex-inappropriate activity, even when such choices cost them money. Moreover, sex-typed individuals report greater psychological discomfort and more negative feelings among themselves when actually engaging in sex-inappropriate behaviour (Bem & Lenney, 1976).

A series of studies on instrumental and expressive functioning provides additional support for the validity of the BSRI. These studies demonstrated that only androgynous

individuals are consistently high in both agentic and communal behaviours, while non-androgynous individuals are frequently low in one of the two domains (Bem, 1975; Bem, Martyna, & Watson, 1976).

Thus, the BSRI does differentiate between persons who organize their perceptions and restrict their behaviour in accordance with cultural definitions of desirable behaviour for men and women and those who do not. The construct validity of the test has thus been demonstrated.

Further, Gaudreau (1977) and Feather (1978), after examining the factor structure of the B.S.R.I., concluded that the test does load on enduring and widespread conceptions of masculinity and femininity and that masculinity and femininity are best considered to be independent traits or dimensions rather than a single bipolar dimension. Feather also indicates the potential of the B.S.R.I. for use in English speaking countries in addition to Canada and the United States.

In their cross-validation of item selection, Walkup and Abbott (1978) replicated Bem's findings for all but one of the feminine items and all but two of the masculine

items. In their work, they were also able to demonstrate that earlier failure to replicate by Edwards and Ashworth (1977) resulted from differences in the anchored rating scale and instructions. Most important, with the exception of Edwards and Ashworth, a number of researchers have confirmed the validity and utility of the BSRI (Feather, 1978; Gaudreau, 1977; Kelly & Worrell, 1977; Bem & Lenney, 1976; Bem, Martyna & Watson, 1976; Wakefield, Sasek, Friedman & Bowden, 1976; Puble, Croke, Frieze & Parsons, 1975; Strahan, 1975; Bem, 1975.)

Some of these same studies have shown that approximately 75% of the variance of the BSPI items can be accounted for by four factors: a feminine factor defined by such items as 'warm', 'gentle', and 'eager to sooth'; a masculine factor defined by such items as 'dominant', 'aggressive' or 'assertive'; a masculine factor defined by items such as 'independent', 'self-reliant' and 'self-sufficient'; and a factor correlated with sex and defined by such items as 'feminine' and 'masculine' (Pedhazur & Tetenbaum, 1979; Berzins et al., 1978; Feather, 1978; Moreland, Gulanick, Montague & Harren, 1978; Gaudreau, 1977).

It was on the basis of these factor analyses that Moreland et al. (1978) criticized Bem's initial definition of androgyny as people high in both masculinity and femininity. Rather, they argue androgynous people should be defined as high in the underlying factors, such as expressiveness and instrumentality. In these terms, they are androgynous because they have not linked these underlying factors to gender in general and to their gender specifically. Clearly, this is entirely consistent with the evolution of Bem's gender schema theory which now defines androgynous people as non-sex-typed and therefore as defining others, themselves and the world on dimensions other than gender.

On a methodological level, some researchers (eg. Feather, 1978) have argued that the elimination of some elements from both scales would serve to increase the homogeneity of the BSRI. Others (e.g. Myers & Gonda, 1982a, 1982b) have suggested that some of these elements do not tap widely known definitions of masculinity and femininity. Bem has rejected these concerns on theoretical grounds. First, as indicated in the previous chapter, gender schema theory makes predictions on the basis of what respondents themselves perceive to be the cultural definitions of masculinity and femininity and the relevance that such definitions have for them. Second, the elements

or attributes that constitute masculinity or femininity are heterogeneous collections arbitrarily clustered by a culture. They need not, and for some individuals do not, hang together. In Bem's words: "to force them to be unidimensional for all individuals would thus violate the theory" (Bem, 1985).

Nevertheless, Bem experimented with a short version of the BSRI on the basis of factor analysis in order to maximize the internal consistency of the femininity and masculinity scales (Bem, 1981a), but she has not used it to test her hypotheses and recommends against its use because of its inconsistency with her theoretical assumptions (Frable & Bem, 1984).

Although findings indicate some methodological problems, the B.S.R.I. has repeatedly proved useful in the classification of individuals on the basis of sex-type and has been shown to be a valid and reliable instrument.

2.3.2 Measures of Performance

The students' scores on objective tests routinely administered by the R.C.M.P. as part of the Basic Recruit Training Course were used as measures of performance in firearms, interviewing and crisis intervention.

The firearms test consists of tests of speed and accuracy of firearm use. Number of target hits with two types of revolvers within a fixed time period determines the percentage score assigned.

Interviewing is assessed by six multiple-part questions on a paper and pencil test scored objectively. The test item types include multiple choice and short answer. The questions are administered in two separate tests, the Transactional Analysis Test and the Victimology Test. Actual answers as well as scores were made available to the experimenter but the anonymity of the respondents was maintained. Examples of items are included in Appendix D.

Crisis intervention is assessed through a paper and pencil test of twenty-six items. Examples of items are included in Appendix D.

2.3.3 Measures of Perceptions

In order to measure recruit perceptions and self-assessments, the Recruit Questionnaire was developed by the author.

2.3.3.a. Recruit Questionnaire

Recruits' perceptions of others and self in sex-appropriate, sex-inappropriate and mixed training situations were measured through the use of the Recruit Questionnaire (Questions 1 and 3 - Appendix C). The Recruit Questionnaire was piloted with a group of five male and five female R.C.M.P. employees to ensure that the questions were understood and interpreted similarly, that the scales employed differentiated among respondents and that respondents believed that their responses yielded a valid indicator of their perceptions, respectively. A copy of the questionnaire is attached in Appendix C. The elements of the Recruit Questionnaire are detailed below.

2.3.3.a.i Measure of Perceptions of Situations

Recruits were asked to indicate on a seven point scale whether they believe women or men to be more or equally able in firearms, interviewing and crisis intervention (Questions 3i, 3ii and 3iii - Appendix C).

2.3.3.a.ii Self-assessments

Recruits were asked to rate their own performance in firearms, interviewing and crisis intervention on a scale of 1-7 ranging from poor to excellent (Question 1 - Appendix C).

2.3.4 General Administrative Procedures

To preclude possible interactive effects between the gender of the subjects and the gender of the experimenter, all subjects were tested by the same male experimenter. The male experimenter administered the BSRI and the Recruit Questionnaire but was unaware of the BSRI scores of subjects. The instructions for the BSRI were prerecorded by the author to ensure voice intonation and language used were constant for all participants in the study. The BSRI instructions were also printed and subjects followed instructions as the tape was played.

All recruits were tested on the BSRI at the beginning of the six month training program. A copy of the test and its instructions is included in Appendix B. Recruits responded to the questions in the Recruit Questionnaire on their perceptions of others and self in training situations two weeks before the end of the six

month recruit training period to ensure that their responses would not be influenced by their actual final scores in the subject areas.

2.3.4.a Scoring

The BSRI was scored according to the procedures outlined in the scoring manual (Bem, 1981a).

The BSRI consists of two scales, a Masculinity Scale and a Femininity Scale. Within each sex, a mean score was calculated for each subject on each scale. The medians Bem derived from normative data on Stanford students (sexes combined) as indicated in her manual (1981a) were employed. The medians for the Masculinity and Femininity Scales are 4.95 and 4.90 respectively.

Four groups of individuals were differentiated: masculine individuals (above 4.95, below 4.90), feminine individuals (below 4.95, above 4.90) androgynous individuals (above 4.95, above 4.90), and undifferentiated individuals (below 4.95, below 4.90).

Following Bem's classification procedures, sex-typed individuals include masculine males and feminine females; cross-sex-typed individuals (masculine females and feminine males) are not included in the statistical design.

Performance scores were calculated separately for firearms, interviewing and crisis intervention. The firearms percentage score was based on numbers of target hits using two types of revolvers. Interviewing scores are a percentage calculated from actual numeric scores obtained by recruits on items 6 and 7 on the Transactional Analysis Test and on items 15, 16, 21 and 22 of the Victimology Test. These items were chosen in consultation with R.C.M.P. training personnel. Scores on crisis intervention are percentage scores calculated from actual scores obtained by recruits on the Victimology Test (excluding items 15, 16, 21 and 22 on interviewing). Many of the test items for both interviewing and crisis intervention consist of several sub-questions. The questions tested both knowledge of specific information and the ability to apply knowledge to previously unseen case studies. Questions were of three types: multiple choice, short answer and essay. Although the tests employed are classified, sample model questions reflective of the actual tests are included in Appendix D.

2.4 STATISTICAL DESIGN

This study tested the effects of gender-schematic thinking on perceptions of self and others and on

performance of male and female recruits in 'masculine', 'feminine' and 'mixed' (masculine and feminine) police training situations.

The independent variables are "gender-schematic thinking of the recruit (A) and gender (B). Factor A, sex-type of the recruit has two levels, sex-typed (A₁) and non-sex-typed (A₂). Gender (B) obviously has two levels, 'male' (B₁) and 'female' (B₂).

All hypotheses were tested using 2 way ANOVA where sex-type and sex were the factors. For Hypotheses A₁ and A₂, two separate ANOVA procedures were used to test the main effect of sex-type on recruits' perceptions of the ability of males versus females in sex-congruent and sex-incongruent situations. Specifically the dependent variable for HA₁ was the recruits' perception of the ability of men versus women in firearms and the dependent variable for HA₂ was the recruits' perception of the ability of men versus women in interviewing (Questions 3i and 3ii of the Recruit Questionnaire, Appendix C).

For Hypothesis HB, an ANOVA procedure was used to test the interaction of sex and sex-type on recruits' self-assessments in sex-congruent versus sex-incongruent situations. Specifically, the dependent variable was the

difference between self-assessment in firearms (S_f) and self-assessment in interviewing (S_i) or $S_f - S_i$ (Question 1i and 1ii of the Recruit Questionnaire, Appendix C).

For Hypothesis HC₁, an ANOVA procedure was used to test the interaction effect of sex and sex-type on the performance of recruits in sex-congruent versus sex-incongruent situations. Specifically, the dependent variable was the difference between performance score in firearms (P_f) and performance score in interviewing (P_i) or $P_f - P_i$.

For Hypothesis HC₂, an ANOVA procedure was used to test the main effect of sex-type on the performance of recruits in sex-congruent versus mixed situations. The dependent variable was the difference between performance scores in sex-congruent and mixed situations. For males, this meant the difference between firearms performance scores (P_f) and crisis intervention performance scores (P_c) or $P_f - P_c$. For females, this meant the difference between interviewing performance scores (P_i) and crisis intervention performance scores (P_c) or $P_i - P_c$.

The raw scores received by recruits in firearms, interviewing and crisis intervention were not directly

comparable because of the different criteria and measuring instruments used. Thus, all performance scores were normed (mean = 0, SD = 1).

Where a significant interaction was found, t-tests were applied as a post hoc procedure (Kirk, 1982).

In addition, exploratory analysis employing ANOVA and Tukey procedures examined differences between androgynous and undifferentiated recruits and between cross-sex-typed and others, consistent with theoretical speculations about the importance of these differences (Payne et al., 1987; Bem, 1985; Markus et al., 1982).

Computationally, the analysis was done using the General Linear Model (of which the usual ANOVA and regression are both special cases) which takes into account different cell sizes. The data were analyzed using the SAS (Statistical Analysis System) package.

CHAPTER 3

PRESENTATION AND DISCUSSION OF RESULTS

This chapter presents and discusses the results of the empirical investigation that is described in the previous chapter. The chapter first presents the descriptive data, then describes the results of the analysis and post hoc and exploratory procedures, and finally, discusses the theoretical and practical implications of the findings.

3.1 DESCRIPTIVE DATA

An examination of the nature of the sample allows for a more refined understanding of the findings.

As discussed in Chapter I, previous research has shown that women in policing are more masculine than women in the normal population. Four t-tests were run on

comparisons between Bem's means for her normed sample and the means for the sample of RCMP recruits. Females in the current sample were more masculine ($t=6.04$, $p \leq .001$) but were not statistically significantly less feminine.

Similarly, males in the current sample were more masculine ($t=2.89$, $p \leq .01$) but the difference in femininity from Bem's normed sample was not statistically significant.

Table V describes the RCMP sample using the medians established by Bem for the total sample and for each sex. T-tests revealed no statistically significant difference in mean scores on the masculinity scale between male and female recruits in the current sample. Females scored higher on the femininity scale than did males ($t=3.48$, $p \leq .001$).

The mean age for women was 23.8 years and the mean education level, first year university or college diploma. For men, the mean age was 24.5 years and the mean education level about three months more than that for women. No correlation was found between either of these variables and sex-type. Because the sample was relatively homogeneous in both age and education, there was no need to control for either variable.

TABLE V
CLASSIFICATION OF SAMPLE BY
BSRI SCORES BASED ON NORMED DATA

SEX TYPE	NORMED DATA					
	Males		Females		Total	
	n	%	n	%	n	%
androgynous	19	28.8	36	41.9	55	36.2
feminine	1	1.5	17	19.8	18	11.8
masculine	38	57.6	24	27.9	62	40.8
undifferentiated	8	12.1	9	10.5	17	11.2
TOTAL	66	100	86	100	152	100

3.2 RESULTS

Each group of hypotheses is discussed separately below. First, each hypothesis is reviewed. Second, the differences in mean scores are described to provide a general picture of the data and to establish direction. The means are described irrespective of the results of the ANOVA procedure. Third, the results of the ANOVA procedure are presented and finally, the results of post hoc procedures, where appropriate, are presented.

3.2.1 Perception: Gender Stereotypic Expectations

Hypotheses HA₁ and HA₂ predicted that sex-typed recruits would report that men are more able than women in masculine situations and that women are more able than men in feminine situations, whereas non-sex-typed recruits would not differentiate on this dimension.

HA₁ Sex-typed recruits (masculine males and feminine females) will report that men are more able than women in the use of firearms whereas non-sex-typed recruits will not differentiate along this dimension.

Table VI displays the relevant means of recruits' perceptions of the ability of males versus females in firearms. A mean of 4 would indicate that males and females were perceived as equal, less than 4 that men were perceived as more able and more than 4 that women were perceived as more able. The differences in means between sex-typed and non-sex-typed recruits across sex and within each sex were smaller than the differences in means between males and females across and within sex-type. While the difference in means between sex-typed and non-sex-typed

TABLE VI

HA₁

MEAN PERCEPTION OF RELATIVE ABILITY
OF MEN VERSUS WOMEN IN FIREARMS

		SEX		ALL RECRUITS
		MALE	FEMALE	
Sex-type	Sex-typed	n=38 $\bar{M}=2.92$ $\underline{SD}=1.00$	n=17 $\bar{M}=4.00$ $\underline{SD}=0.35$	n=55 $\bar{M}=3.25$ $\underline{SD}=0.98$
	Non-sex-typed	n=27 $\bar{M}=2.59$ $\underline{SD}=1.22$	n=45 $\bar{M}=3.90$ $\underline{SD}=0.29$	n=72 $\bar{M}=3.41$ $\underline{SD}=1.00$
All Recruits		n=65 $\bar{M}=2.78$ $\underline{SD}=1.10$	n=62 $\bar{M}=3.93$ $\underline{SD}=0.31$	

- NOTE: 1. Mean is based on responses on a seven point scale where 1 indicates men are much more able, 7 that women are much more able, and 4 that men and women are equal in ability.
2. Cross-sex-typed recruits were not included in the analysis.

recruits across sex was in the predicted direction, this was not the case for the differences in means between sex-typed and non-sex-typed recruits within each sex. Apparently, females, regardless of sex-type, perceived men and women as closer in ability in firearms than did males who saw men as more able than women.

Table VII displays the results of the ANOVA procedure. The ANOVA for perceptions of the relative ability of males and females in firearms did not find the predicted main effect for sex-type, and found no interaction between sex and sex-type. A sex effect was found ($F(1,123)=60.50, p \leq .001$). Hypothesis HA_1 is not supported by the data. Furthermore, the power of this test to detect a medium size effect (0.5 SDs or a difference between means of 0.49) is 0.98. Thus, the experiment was sufficiently powerful that it is unlikely that a medium size effect existed but remained undetected (Cohen, 1969).

HA_2 Sex-typed recruits (masculine males and feminine females) will report that women are more able than men in interviewing whereas non-sex-typed recruits will not differentiate along this dimension.

Table VIII displays the relevant means of recruits' perceptions of the ability of males versus females in interviewing. A mean of 4 would indicate that males and females were perceived as equal, less than 4 that men were

TABLE VII

HA₁

PERCEPTION OF RELATIVE ABILITY OF
MEN VERSUS WOMEN IN FIREARMS

2 WAY ANOVA (2 X 2)

SOURCE	df	SS	F	p
Sex	1	39.80	60.50	.0001
Sex-type (sex-typed/ non-sex-typed)	1	1.21	1.83	.18
Sex * Sex-type (Interaction)	1	0.40	0.60	.44

Error: df=123,SS=80.93

NOTE: 1. Cross-sex-typed recruits were not included in
the analysis.

TABLE VIII

HA₂

MEAN PERCEPTION OF RELATIVE ABILITY
OF MEN VERSUS WOMEN IN INTERVIEWING

	SEX		ALL RECRUITS
	MALE	FEMALE	
Sex-type Sex-typed	n=38 $\bar{M}=4.03$ $\underline{SD}=0.68$	n=17 $\bar{M}=4.41$ $\underline{SD}=0.71$	n=55 $\bar{M}=4.14$ $\underline{SD}=0.70$
Non-sex-typed	n=27 $\bar{M}=3.56$ $\underline{SD}=0.85$	n=45 $\bar{M}=4.40$ $\underline{SD}=0.65$	n=72 $\bar{M}=4.08$ $\underline{SD}=0.83$
All Recruits	n=65 $\bar{M}=3.83$ $\underline{SD}=0.78$	n=62 $\bar{M}=4.40$ $\underline{SD}=0.66$	

- NOTE: 1. Mean is based on responses on a seven point scale where 1 indicates men are much more able, 7 that women are much more able, and 4 that men and women are equal in ability.
2. Cross-sex-typed recruits were not included in the analysis.

perceived as more able and more than 4 that women were perceived as more able. Again the differences in means between males and females were greater than those between sex-typed and non-sex-typed recruits. Females appeared to perceive women as relatively more able and males appeared to perceive men as relatively more able in interviewing. Contrary to prediction, sex-typed males apparently perceive men and women as relatively equal while non-sex-typed males apparently see men as more able.

Table IX displays the results of the ANOVA procedure. The ANOVA for perceptions of relative ability of males and females in interviewing did not find the predicted main effect for sex-type and found no interaction between sex and sex-type. A sex effect was found ($F(1,123)=20.60, p \leq .001$). Hypothesis HA_2 is not supported by the data. Furthermore, the power of this test to detect a medium size effect (0.5 SDs or a difference between means of 0.38) is 0.98. Thus, the experiment was sufficiently powerful that it is unlikely that a medium size effect existed but remained undetected (Cohen, 1969).

3.2.2 Self-assessment: Sex-congruent Versus Sex-incongruent

Hypothesis HB predicted that sex-typed recruits would report more positive self-assessments in sex-congruent situations than in sex-incongruent situations while non-sex-typed recruits would not.

TABLE IX

HA₂

PERCEPTION OF RELATIVE ABILITY OF
MEN VERSUS WOMEN IN INTERVIEWING

2 WAY ANOVA (2 X 2)

SOURCE	df	SS	F	p
Sex	1	10.47	20.60	0.001
Sex-type (sex-typed/ non-sex-typed)	1	1.61	3.17	0.08
Sex * Sex-type (Interaction)	1	1.46	2.87	0.09

Error: df=123, SS=62.56

NOTE: 1. Cross-sex-typed recruits were not included in the analysis.

HB The self-assessments of sex-typed individuals will be higher with respect to sex-congruent situations than sex-incongruent situations whereas sex-congruence will not affect the self-assessments of non-sex-typed individuals.

- a. Sex-typed (masculine) male recruits will report more positive self-assessments in the use of firearms than in interviewing whereas non-sex-typed male recruits will not discriminate along this dimension.
- b. Sex-typed (feminine) female recruits will report more positive self-assessments in interviewing than in the use of firearms whereas non-sex-typed female recruits will not differentiate along this dimension.

Table X displays the difference in means of self-assessments of recruits in firearms versus interviewing, where a negative value indicates a higher self-assessment in interviewing and a positive value, a higher self-assessment in firearms. All categories of recruits, regardless of sex and sex-type, assessed themselves as better in interviewing than in firearms. Contrary to prediction, sex-typed males seemed to assess themselves as relatively better in interviewing to a greater extent than did non-sex-typed males. Non-sex-typed females seemed to assess themselves as relatively better in interviewing to a greater extent than did sex-typed females. Apparently, males, regardless of sex-type, assessed themselves as relatively more able in interviewing than did females.

TABLE X

HB

DIFFERENCE IN MEAN SELF-ASSESSMENTS
FIREARMS MINUS INTERVIEWING

	SEX	
	MALE	FEMALE
Sex-typed	n=38 $\bar{M}=-1.10$ $\underline{SD}=1.11$	n=17 $\bar{M}=-0.41$ $\underline{SD}=0.80$
Non-sex-typed	n=27 $\bar{M}=-0.96$ $\underline{SD}=1.34$	n=45 $\bar{M}=-0.49$ $\underline{SD}=0.73$
All Recruits	n=65 $\bar{M}=-1.05$ $\underline{SD}=1.20$	n=62 $\bar{M}=-0.47$ $\underline{SD}=0.74$

- NOTE:
1. Mean represents the difference in recruit self-assessments on two seven point scales, one for firearms and one for interviewing, where 1 represents 'poor' and 7 represents 'excellent'.
 2. Cross-sex-typed recruits were not included in the analysis.

Table XI displays the results of the ANOVA procedure. The ANOVA for relative self-assessments in firearms and interviewing did not find the predicted interaction between sex and sex-type, but did find a significant sex effect ($F(1,123)=9.22, p \leq .01$). Hypothesis HB is not supported by the data.

3.2.3. Performance: Sex-congruent Versus Sex-incongruent

Hypothesis HC₁ predicted that sex-typed recruits would perform better in sex-congruent than in sex-incongruent situations while sex-congruence would not affect the performance of non-sex-typed individuals.

HC₁ The performance scores of sex-typed individuals will be higher in sex-congruent than in sex-incongruent situations whereas sex-congruence will not affect the performance scores of non-sex-typed individuals.

- a. Sex-typed (masculine) males will perform better in the masculine situation (use of firearms) than in the feminine situation (tests of their knowledge of interviewing) to a greater extent than will non-sex-typed males.
- b. Sex-typed (feminine) females will perform better in the feminine situation (tests of their knowledge of interviewing) than in the masculine situation (use of firearms) to a greater extent than will non-sex-typed females.

TABLE XI

HB

DIFFERENCE IN MEAN SELF-ASSESSMENTS
FIREARMS MINUS INTERVIEWING

2 WAY ANOVA (2 X 2)

SOURCE	df	SS	F	p
Sex	1	9.44	9.22	0.003
Sex-type (sex-typed/ non-sex-typed)	1	0.03	0.03	0.86
Sex * Sex-type (Interaction)	1	0.33	0.33	0.57

Error: df=123, SS=125.90

NOTE: 1. Cross-sex-typed recruits were not included in the analysis.

Table XII displays the difference in recruits' mean normed performance scores in firearms minus interviewing, where a negative value indicates better performance in tests of interviewing and a positive value, better performance in tests of firearms. Women, regardless of sex-type, performed better in interviewing than in firearms and this was particularly the case for non-sex-typed women. Further, and also contrary to prediction, the difference in performance scores between firearms and interviewing was apparently greater for non-sex-typed males than for sex-typed males. Non-sex-typed males seemed to perform better in firearms than in interviewing while there seemed relatively little difference in performance scores for sex-typed males.

Table XIII displays the results of the ANOVA procedure. The ANOVA for relative performance in firearms and interviewing found the predicted sex by sex-type interaction ($F(1,123)=7.03, p \leq .01$); however, as indicated, the mean differences were in the wrong direction. Hypothesis HC₁ is therefore not supported by the data.

As a post hoc procedure, t-tests were used to compare the performance means of sex-typed and non-sex-typed recruits within each sex. The difference between means for sex-typed and non-sex-typed women was not

TABLE XII

HC₁

DIFFERENCE IN MEAN NORMED PERFORMANCE SCORES
FIREARMS MINUS INTERVIEWING

		SEX	
		MALE	FEMALE
Sex-type	Sex-typed	n=38 $\bar{M}=-0.01$ $\underline{SD}=1.36$	n=17 $\bar{M}=-0.31$ $\underline{SD}=1.19$
	Non-sex-typed	n=27 $\bar{M}=1.09$ $\underline{SD}=1.51$	n=45 $\bar{M}=-0.49$ $\underline{SD}=0.99$
All Recruits		n=65 $\bar{M}=0.46$ $\underline{SD}=1.51$	n=62 $\bar{M}=-0.44$ $\underline{SD}=1.04$

- NOTE:
1. Mean represents the difference in normed performance scores ($M=0, SD=1$) in firearms and interviewing.
 2. Cross-sex-typed recruits were not included in the analysis.

TABLE XIII

HC₁

DIFFERENCE IN MEAN NORMED PERFORMANCE SCORES
FIREARMS MINUS INTERVIEWING

2 WAY ANOVA (2 X 2)

SOURCE	df	SS	F	p
Sex	1	25.03	15.86	0.0001
Sex-type (sex-typed/ non-sex-typed)	1	5.59	3.54	0.06
Sex * Sex-type (Interaction)	1	11.10	7.03	0.009

Error: df=123, SS=194.12

NOTE: 1. Cross-sex-typed recruits were not included in the analysis.

statistically significant. The difference between means for sex-typed and non-sex-typed men was significant ($t=3.02, df=63, p \leq .01$); however, non-sex-typed males performed relatively better in the sex-congruent (firearms) situation than in the sex-incongruent (interviewing) situation to a greater extent than did sex-typed males.

Hypothesis HC₂ predicted that sex-typed recruits would perform better in sex-congruent situations (firearms for males and interviewing for females) than in mixed situations (crisis intervention) whereas sex-congruence would not affect the performance of non-sex-typed individuals.

HC₂ The performance scores of sex-typed individuals will be higher in sex-congruent than in mixed situations whereas sex-congruence will not affect the performance scores of non-sex-typed individuals.

- a. Sex-typed (masculine) males will perform better in the masculine situation (use of firearms) than in the mixed situation (tests of their knowledge of crisis intervention) to a greater extent than will non-sex-typed males.
- b. Sex-typed (feminine) females will perform better in the feminine situation (tests of their knowledge of interviewing) than in the mixed situation (tests of their knowledge of crisis intervention) to a greater extent than will non-sex-typed females.

Table XIV displays the difference in mean normed performance scores in sex-congruent versus mixed situations. The sex-congruent situation for females is

TABLE XIV

HC₂

DIFFERENCE IN MEAN NORMED PERFORMANCE SCORES
SEX-CONGRUENT MINUS MIXED SITUATION

		SEX	
		MALE	FEMALE
Sex-type	Sex-typed	n=38 $\bar{M}=-0.06$ $\underline{SD}=1.21$	n=17 $\bar{M}=-0.12$ $\underline{SD}=1.08$
	Non-sex-typed	n=27 $\bar{M}=0.94$ $\underline{SD}=1.78$	n=45 $\bar{M}=0.14$ $\underline{SD}=1.03$
All Recruits		n=65 $\bar{M}=0.36$ $\underline{SD}=1.54$	n=62 $\bar{M}=0.07$ $\underline{SD}=1.06$

- NOTE: 1. Mean for females represents the difference in normed performance scores between interviewing (sex-congruent) and crisis intervention (mixed) and for males represents the difference in normed performance scores between firearms (sex-congruent) and crisis intervention (mixed).
2. Cross-sex-typed individuals were not included in the analysis.

interviewing and for males, firearms. A negative value indicates a better performance in the mixed situation and a positive value a better performance in the sex-congruent situation. Contrary to prediction, non-sex-typed recruits appeared to perform better in sex-congruent than mixed situations while sex-typed recruits appeared to perform better in mixed than in sex-congruent situations. This seemed the case across sex and within each sex.

The results of the ANOVA procedure are displayed in in Table XV. The ANOVA procedure revealed no interaction, but did find a sex-type effect ($F(1,23)=6.58, p \leq .01$). The means, however, were in the opposite direction to that predicted; that is, non-sex-typed recruits performed better in sex-congruent than in mixed situations to a greater extent than did sex-typed recruits. Hypothesis HC₂ is not supported by the data.

As a post hoc procedure, t-tests were used to compare sex-typed and non-sex-typed recruits within each sex. There was no significant difference between the means for sex-typed and non-sex-typed females. Among males, non-sex-typed recruits performed better in sex-congruent than in mixed situations to a greater extent than did sex-typed recruits ($t=-2.51, df=42.5, p \leq .01$).

TABLE XV

HC₂

DIFFERENCE IN MEAN NORMED PERFORMANCE SCORES
SEX-CONGRUENT MINUS MIXED SITUATION

2 WAY ANOVA (2 X 2)

SOURCE	df	SS	F	p
Sex	1	5.13	3.12	.08
Sex-type (sex-typed/ non-sex-typed)	1	10.83	6.58	.01
Sex * Sex-type (Interaction)	1	3.76	2.28	.13

Error: df=123, SS=202.46

NOTE: 1. Cross-sex-typed recruits were not included in the analysis.

3.3 EXPLORATORY ANALYSIS

The ANOVA procedure for each hypothesis revealed a sex effect in all but HC₂. Males and females were found to be different in their perceptions of the relative ability of men and women in firearms and in interviewing. Males perceived men as relatively better able in firearms to a greater extent than did females and females perceived women as relatively better able in interviewing than did males.

With respect to self-assessments, males were different from females, but, counter-intuitively, males assessed themselves as relatively better in interviewing than in firearms to a greater extent than did females.

An effect for sex was also found for relative performance in firearms versus interviewing. Males were relatively better in firearms while females were relatively better in interviewing.

Thus, exploratory analysis was designed to examine sex differences in greater detail as well as to explore differences between androgynous and undifferentiated individuals and between cross-sex-typed and other sex-typed individuals as originally planned. To this end, the

sample was divided into eight groups by sex and sex-type; that is, male and female androgynous, masculine, feminine and undifferentiated individuals. Because there was only one feminine male in the sample, he was dropped from the analysis. An ANOVA procedure was applied to the remaining seven groups for each of the dependent variables specified in the hypotheses. This was followed by the application of the Tukey procedure which was selected because it is conservative and has the greatest power for testing differences among all possible pairs (Keith, 1972).

3.3.1 Perception: Sex Stereotypic Expectations

The ANOVA procedure performed for the seven groups revealed a significant effect with respect to perceptions of the relative ability of males and females in firearms ($F(6,144)=13.93, p \leq .001$). The relevant means are presented in Table XVI. In every possible intersex comparison, the means for male recruits were lower than for female recruits, suggesting that males perceived men as more able in firearms to a greater extent than did females. Contrary to expectation, a comparison of means among male recruits indicates that masculine males seem to perceive men and women as closer to equal in ability than did other males.

TABLE XVI
HA₁ EXPLORATORY ANALYSIS
MEAN PERCEPTION OF RELATIVE ABILITY OF MEN
VERSUS WOMEN IN FIREARMS

Sex Type	Sex						All Recruits		
	Males			Females					
	<u>n</u>	Mean	<u>SD</u>	<u>n</u>	Mean	<u>SD</u>	<u>n</u>	Mean	<u>SD</u>
Androgynous	19	2.47	1.26	36	3.92	0.28	55	3.42	1.03
Masculine	38	2.92	1.00	24	3.83	0.48	62	3.27	0.94
Feminine	-	-	-	17	4.00	0.35	17	4.00	0.35
Undifferentiated	8	2.88	1.12	9	3.89	0.33	17	3.41	0.94
All Recruits	65	2.78	1.10	86	3.91	0.36			

NOTE: 1. Mean is based on responses on a seven point scale where 1 indicates men are much more able, 7 that women are much more able, and 4 that men and women are equal in ability.

2. The feminine male was not included in the analysis.

Androgynous males seemed to perceive men as more able than women to a greater extent than did all other categories of recruits. The differences in means among female recruits were small. Contrary to expectation, feminine females appeared to perceive men and women as closer to equal in ability than did other categories of females.

The Tukey procedure examining paired comparisons revealed significant differences between all intersex comparisons with the exception of undifferentiated males and undifferentiated females. In every other case, males were different from females regardless of sex-type ($p \leq .05$). There were no statistically significant within-sex paired comparisons.

The ANOVA procedure performed for the seven groups revealed a significant effect with respect to perception of the relative ability of males and females in interviewing ($F(6,144)=4.56, p \leq .001$). The relevant means are presented in Table XVII. In every possible intersex comparison, the means for female recruits were higher than for male recruits, suggesting that females perceived women as more able than men in interviewing to a greater extent than did male recruits. A comparison of means among male recruits indicates that androgynous and undifferentiated males seemed to perceive men as relatively more able than women

TABLE XVII
HA₂ EXPLORATORY ANALYSIS
MEAN PERCEPTION OF RELATIVE ABILITY
OF MEN VERSUS WOMEN IN INTERVIEWING

Sex Type	Sex						All Recruits		
	Males			Females					
	<u>n</u>	Mean	<u>SD</u>	<u>n</u>	Mean	<u>SD</u>	<u>n</u>	Mean	<u>SD</u>
Androgynous	19	3.63	0.76	36	4.39	0.64	55	4.13	0.77
Masculine	38	4.03	0.68	24	4.17	0.76	62	4.08	0.71
Feminine	-	-	-	17	4.41	0.71	17	4.41	0.71
Undifferentiated	8	3.37	1.06	9	4.44	0.73	17	3.94	1.03
All Recruits	65	3.83	0.78	86	4.34	0.70			

NOTE: 1. Mean is based on responses on a seven point scale where 1 indicates men are much more able, 7 that women are much more able, and 4 that men and women are equal in ability.

2 The feminine male was not included in the analysis.

in interviewing to a greater extent than did masculine males. Again, the differences in means among female recruits were quite small. Masculine females apparently perceived men and women as closer to equal in ability than did other categories of women.

The Tukey procedure showed the following significant paired comparisons:

undifferentiated males versus undifferentiated females
undifferentiated males versus androgynous females
undifferentiated males versus feminine females
androgynous males versus androgynous females
androgynous males versus feminine females

Again no within-sex differences in means were found to be statistically significant.

3.3.2 Self-assessment: Sex-congruent Versus Sex-incongruent

The ANOVA procedure performed for the seven groups revealed an effect with respect to the relative self-assessments of recruits in firearms and interviewing ($F(6,144)=2.86, p \leq .01$). The relevant means are presented in Table XVIII.

TABLE XVIII
HB EXPLORATORY ANALYSIS
DIFFERENCE IN MEAN SELF-ASSESSMENTS
FIREARMS MINUS INTERVIEWING

Sex Type	Sex						All Recruits		
	Males			Females					
	<u>n</u>	Mean	<u>SD</u>	<u>n</u>	Mean	<u>SD</u>	<u>n</u>	Mean	<u>SD</u>
Androgynous	19	-1.16	1.17	36	-0.47	0.70	55	-0.71	0.94
Masculine	38	-1.10	1.11	24	-0.33	0.96	62	-0.81	1.11
Feminine	-	-	-	17	-0.41	0.80	17	-0.41	0.80
Undifferentiated	8	-0.56	0.88	9	-0.56	0.88	17	-0.53	1.28
All Recruits	65	-1.05	1.20	86	-0.43	0.80			

NOTE: The feminine male was not included in the analysis.

The means indicate that all categories of recruits assess themselves as more able in interviewing than in firearms and that seemed particularly the case for androgynous and masculine males. The Tukey procedure revealed no statistically significant paired comparisons.

3.3.3 Performance: Sex-congruent Versus Sex-incongruent

The ANOVA procedure performed for the seven groups revealed an effect with respect to the relative performance of recruits in firearms and interviewing ($F(6,144)=5.53$, $p \leq .001$). The relevant means are presented in Table XIX.

A comparison of means reveals that all categories of females perform better in tests of interviewing with the performance of undifferentiated females apparently close to equal in interviewing and firearms. All males perform better in tests of firearms use than in interviewing with masculine males apparently close to equal in performance in the two situations.

The Tukey procedure revealed differences in the paired comparisons between undifferentiated males and all categories of females except for undifferentiated females

TABLE XIX
HC₁ EXPLORATORY ANALYSIS
DIFFERENCE IN MEAN NORMED PERFORMANCE SCORES
FIREARMS MINUS INTERVIEWING

Sex Type	Sex						All Recruits		
	Males			Females					
	<u>n</u>	Mean	<u>SD</u>	<u>n</u>	Mean	<u>SD</u>	<u>n</u>	Mean	<u>SD</u>
Androgynous	19	1.00	1.09	36	-0.58	0.89	55	-0.03	1.22
Masculine	38	0.04	1.36	24	-0.26	1.06	62	-0.08	1.26
Feminine	-	-	-	17	-0.28	1.19	17	-0.28	1.19
Undifferentiated	8	1.44	2.30	9	-0.02	1.29	17	0.67	1.93
All Recruits	65	0.49	1.52	86	0.37	1.05			

NOTE: The feminine male was not included in the analysis.

and between androgynous males and all categories of females except for undifferentiated females ($p=.05$). In these pairs, the males performed better in firearms than in interviewing while the opposite was the case for the females. There were no statistically significant within-sex differences.

The ANOVA procedure performed for the seven groups revealed an effect with respect to the relative performance of recruits in sex-congruent and mixed (crisis intervention) situations ($F(6,144)=2.16, p\leq .05$). The relevant means are presented in Table XX.

Contrary to expectation, a comparison of means within categories of male recruits suggests that androgynous and undifferentiated males performed better in tests of firearms use than in tests of crisis intervention to a greater extent than did masculine males. In fact, the mean for masculine males suggests that there was little difference in their performance in the two situations. The means for female recruits indicate that androgynous and masculine females seemed to perform better in tests of interviewing than in tests of crisis intervention while the reverse was found for feminine and undifferentiated females.

TABLE XX
HC₂ EXPLORATORY ANALYSIS
DIFFERENCE IN MEAN NORMED PERFORMANCE SCORES
SEX-CONGRUENT MINUS CRISIS INTERVENTION

Sex Type	Sex						All Recruits		
	Males			Females					
	<u>n</u>	Mean	<u>SD</u>	<u>n</u>	Mean	<u>SD</u>	<u>n</u>	Mean	<u>SD</u>
Androgynous	19	0.79	1.54	36	0.18	1.09	55	0.39	1.28
Masculine	38	-0.06	1.21	24	0.21	1.11	62	0.04	1.17
Feminine	-	-	-	17	-0.12	1.08	17	-0.12	1.08
Undifferentiated	8	1.27	2.35	9	-0.09	0.82	17	0.58	1.79
All Recruits	65	0.36	1.54	86	0.11	1.06			

NOTE: The feminine male was not included in the analysis.

The Tukey procedure revealed no statistically significant paired comparisons.

In addition, to gain a refined understanding of the performance differences by sex and sex-type, a two way ANOVA was conducted for the raw performance scores of each of firearms, interviewing and crisis intervention. This allowed an exploration of whether the differences found between firearms and interviewing and between firearms and crisis intervention were a result of differences in performance in one or more of these situations. No interaction or main effect was found with respect to performance in crisis intervention. A sex effect was found for performance in interviewing; the performance scores of female recruits were higher than those of male recruits ($F(1,123)=6.45, p \leq .01$).

A sex-type and a sex effect were found for performance in the use of firearms; the performance scores of male recruits were better than those of female recruits ($F(1,123)=6.37, p \leq .01$) and, contrary to expectation, the performance scores of non-sex-typed recruits were higher than those of sex-typed recruits ($F(1,123)=5.53, p \leq .05$). The relevant means are presented in Table XXI.

TABLE XXI
MEAN PERFORMANCE SCORES FOR
FIREARMS, INTERVIEWING AND CRISIS INTERVENTION

	Sex Type	Firearms			Interviewing			Crisis Intervention		
		<u>n</u>	Mean	<u>SD</u>	<u>n</u>	Mean	<u>SD</u>	<u>n</u>	Mean	<u>SD</u>
Males	Androgynous	19	88.41	4.46	19	81.53	11.42	19	89.68	8.01
	Masculine	38	84.17	7.30	38	85.13	14.44	38	90.89	5.92
	Feminine	-	-	-	-	-	-	-	-	-
	Undifferentiated	8	89.62	6.97	8	78.37	20.94	8	87.75	11.50
Females	Androgynous	36	83.51	5.10	36	91.53	9.31	36	92.47	6.60
	Masculine	24	83.76	5.96	24	88.01	8.75	24	90.4	7.03
	Feminine	17	83.09	6.58	17	87.00	11.43	17	92.05	5.14
	Undifferentiated	9	85.78	6.22	9	89.00	14.18	9	92.55	3.57

NOTE: The feminine male was not included in the analysis.

3.4 SUMMARY OF FINDINGS

None of the hypotheses were supported by the data: there was no evidence that sex-type affected perception of ability, self-assessment or performance in the predicted direction. Although an interaction effect for HC₁ was found, the mean difference was not in the direction predicted for males and no difference was found for females. Non-sex-typed males performed relatively better in the sex-congruent situation (firearms) than in the sex-incongruent situation (interviewing) to a greater extent than did sex-typed males. Similarly although a main sex-type effect was found for HC₂, the mean difference was in the wrong direction. Non-sex-typed recruits performed better in sex-congruent than in mixed situations to a greater extent than did sex-typed recruits. Within-sex t-tests revealed a significant difference only between sex-typed and non-sex-typed males. Further exploration revealed that the difference was largely a function of performance differences in firearms where non-sex-typed males scored higher than sex-typed males.

Examination of the data revealed a persistent sex effect for all dependent variables with the exception of relative performance in sex-congruent versus mixed

situations. When subjects were divided into seven groups by sex and sex-type, statistically significant paired comparisons were found for gender stereotypic expectations, self-assessment and performance in sex-congruent and sex-incongruent situations, in every case confirming the importance of between rather than within-sex comparisons. The post hoc and exploratory procedures revealed that men were more stereotyped than women in their perceptions of relative ability and received better performance scores in the use of firearms than did women although they were less likely than women to assess themselves as relatively better in firearms than in interviewing.

3.5 DISCUSSION OF FINDINGS

The original purpose of this study was to test the applicability of gender schema theory to the police training setting, and specifically to test hypotheses derived from Bem's theory with respect to perception, self-assessment and performance. No support was obtained and in some important respects, data patterns contradicted predictions from Bem's theory. It is therefore particularly important to discuss the limitations of the study before discussing the findings.

3.5.1 Limitations of the Study

The use of a field approach, necessary to test the applicability of Bem's (1985) theory to the police training situation, presented some boundary conditions and some methodological problems, particularly with respect to the distribution of the sample and the measures of dependent variables.

The sample size used in this study was larger than most similar studies and was comprised of relatively equal numbers of males and females. Furthermore, the age and education of the sample were relatively homogeneous. However, Bem's (1981, 1983, 1985) laboratory studies selected subjects on the basis of their BSRI scores to ensure sufficient and equal representation of sex-typed and non-sex-typed subjects in the samples. Because this was not possible in the police training situation, all cell sizes were determined on the basis of the BSRI scores as they naturally occurred. Eighteen subjects classified as cross-sex-typed were eliminated from the statistical design. Overall, the male sample was disproportionately sex-typed and the female sample disproportionately non-sex-typed. Although this was a boundary condition of the study, it created limits on the ability to conduct exploratory analyses, particularly with respect to cross-sex-typed recruits.

Measures of the dependent variables were also problematic in the police training situation. Because the experimenter was required to minimize intrusion in training and avoid in any way modifying the training process, measures of perception and self-assessment were restricted to a single Recruit Questionnaire. More problematic, however, were the measures for performance in tests of firearms use and knowledge of interviewing and crisis intervention. Because it was necessary to use the official R.C.M.P. test results, performance data were limited to the scores received on paper and pencil tests and in the case of firearms, actual shooting tests. Although the training situation includes numerous role-play and simulation exercises which would have provided richer data on performance, no standardized data were available. The study would have been enriched by the introduction of observational techniques, for example, videotaping and systematic scoring techniques for performance in role-play and simulated situations.

3.5.2 Interpretation of the Findings

Notwithstanding the methodological limitations, the findings raise some questions about the applicability of gender schema theory to the police training setting.

Four general findings deserve comment: there was persistent evidence of a sex effect; there was little evidence of a sex-type effect; when there was evidence of a sex-type effect, this was not in the predicted direction.

Of particular importance, clearly, is the absence of a sex-type effect. A number of possible explanations may be suggested. First, however, one must examine how the setting of this research differs from the laboratory conditions under which gender schema theory had been tested previously.

3.5.2.a Features of the Setting

Deaux (1985) and Pervin (1985) have argued that it is essential to delineate the differences between the laboratory setting and specific natural settings if we are to come to understand the often contradictory findings of these two kinds of research. With specific reference to gender-related research, Deaux writes:

Within the laboratory, it is possible to vary the degree to which gender is salient. Under some conditions, ... one can conduct a relatively 'gender-free' test... Outside of the laboratory setting, it is more likely that

gender-related considerations will always be salient to some degree. Observed differences between women and men thus cannot be considered as simply indices of capability, but rather must be interpreted in terms of individual choice, situational pressures, and structural factors. The multiply determined character of most social behaviours is nowhere more evident than in the case of gender-related behaviours (pp. 63-64).

This issue will be discussed under the following headings: Sex-saliency, Sex Ratio, Availability of Information, and Complexity of Situations.

3.5.2.a.i Sex-saliency

In the R.C.M.P. training situation, sex is arguably highly salient and this may help to account for the persistent sex effect and the absence of a sex-type effect.

The sex effect found in this study is consistent with the large body of literature, within both the social learning and cognitive developmental perspectives, on the

effects on perception, self-assessment and behaviour of early sex-role socialization and the development of stable sex-role identity (Laws, 1979; Frieze, Parsons, Johnson, Ruble & Zelman, 1978; Kohlberg, 1966; Deaux, 1985). As Tresemer and Pleck (1976, p. 371) write, "the dichotomization of gender is perhaps the easiest and most powerful differentiation to which people cling."

The effects of sex-role identity may be enhanced in social situations in which sex-role polarities have become reified, that is, institutionalized into sex-typed occupations and tasks (Adler-Russell, 1983; Mason, 1976; Epstein, 1971). In the police training situation, male and female recruits were trained separately; different entrance standards were applied to each, for example, with respect to education level; and men and women were symbolically differentiated from one another through their uniforms. The persistent sex effect may thus in part reflect the saliency of sex within police training.

3.5.2.a.ii Sex Ratio

Further, the saliency of sex may serve to blur sex-type differences for all police recruits and particularly for female recruits who may be bound together by their minority group status (Kantor, 1976).

Deaux has suggested that the ratio of males to females in a setting or occupational group may have important effects on the outcome of studies in such settings. In the R.C.M.P. training setting, not only are women statistically in the minority, they are also arguably a minority in the sociological sense.

In fact, the finding that women, both sex-typed and non-sex-typed, were relatively non-sex-stereotyped in their perceptions is consistent with a number of studies which show that minority status often blurs internal differences among women and leads to a denial of sex-stereotypes (Spence & Helmreich, 1981; McGuire, McGuire, & Winton, 1979; McGuire, McGuire, Child & Fujioka, 1978; McCaghy, 1976).

3.5.2.a.iii Availability of Information

Another crucial difference between this research and that conducted in the laboratory is the amount of information available to the subjects with respect to the issues under investigation. Particularly, given the sex-saliency in the R.C.M.P. training situation, a good deal of information was available to recruits on their own performances, on the performances of other recruits and on performance differences, both real and imagined, between

male and female recruits. Bem has argued that while the perceptions of sex-typed people are filtered through their gender schema, non-sex-typed people are able to process information in a way which is not mediated by gender stereotypes. Thus sex-typed and non-sex-typed individuals process information differently. Bem concedes, however, that both categories may emit similar behaviours despite differences in information processing (Bem, 1985; Taylor & Crocker, 1981). Thus, non-sex-typed recruits and sex-typed recruits might both indicate that males are better in firearms and females in interviewing, the former because of stereotypic expectations and the latter because this is what they have observed or experienced in the police training situation. In other words, sex-typed and non-sex-typed individuals may manifest similar perceptions of others and self but for different reasons. Both may appear stereotyped in their perceptions even if the perceptions of sex-typed individuals are filtered through gender schema and the perceptions of non-sex-typed individuals are not. Among police recruits, the availability of information on and the frequent discussions of gender differences may influence the perceptions of non-sex-typed people just as gender schema shape the perceptions of sex-typed people.

For example, it may be that sex-typed males perceived men as more able than women in firearms because of their schema while non-sex-typed males held the same

perception because of what they observed or experienced in the police training setting. In this sense, for the sex-typed recruit, the perception reflects a gender schema based on cultural stereotypes whereas for the non-sex-typed recruit it is an empirical generalization. As Deaux (1985) suggests, there is a growing convergence in the literature on gender stereotypes that those who work from cultural gender schema (sex-typed individuals) and those who do not (non-sex-typed individuals) do process information differently. The former group processes information in a way which would confirm the stereotype while this would not be the case for the latter; sex-typed individuals process information selectively while non-sex-typed individuals are more open to the full range of information available and to interpreting that information in a variety of ways. However, where the information itself and the interpretations available in any particular subculture tend to confirm gender stereotypes, the outcome of schematic and non-schematic thinking may appear to be the same.

In this particular study, the perceptions and performances of recruits were measured after they had completed several months of their training. Thus, their experiences over time may have influenced their responses in a way which would not occur in the laboratory setting.

3.5.2.a.iv Complexity of Situations

The finding that non-sex-typed males performed better in firearms than did sex-typed males raises further questions of the applicability of the theory at least to this natural setting. While the use of firearms is stereotypically masculine in our culture, in a real life or natural setting, the effective use of firearms may in fact require both stereotypically feminine and stereotypically masculine attributes, caution as well as assertiveness, patience as well as aggression. While stereotypically it may be assumed that such attributes as aggressiveness or assertiveness will result in better performance in masculine situations, these assumptions may break down in practice (see Adler-Russell, 1983).

Bem would argue that masculine recruits would perceive the firearms situation as masculine, would feel comfortable because they perceive the situation as sex-congruent and would therefore perform better in this situation than in sex-incongruent situations. It may be, on the other hand, that the performance of masculine males suffers precisely because of the limiting effect of their stereotypic expectations which do not allow them to perceive the feminine aspects of the situation. In Bem's (1985, p. 222) terms, the sex-typed male may be "projecting

gender into situations in a way which is irrelevant to the actual demands of the situation and therefore creates 'artificial constraints' on his behaviour."

3.5.2.b Implications for Research in the Natural Setting

The findings of this study suggest that the application of gender schema theory to the natural setting will require an approach quite different from that employed in the laboratory, an approach that recognizes the greater complexity of the natural setting and the complex interaction between social situation and sex-typing.

Research should focus not on differences in perception, self-assessment or performance but on the process of perceiving, assessing self and approaching or avoiding performances. Bem (1983, p. 608) makes this argument when she writes that "gender schema is a theory of process, not content." In the laboratory, the outcome of the process, in the form of a performance or a perception, may often be a good indicator of the process itself. In the natural setting, this may be less often the case.

For example, rather than only asking how subjects assess themselves or whether subjects perceive men or women as better able in any situation, one must also determine

whether the perceptions reflect culturally-derived gender schema or direct observation or experience. That is, one must get at the reasons for perceptions rather than simply the perceptions themselves. Research should ask subjects to explain their perceptions of the relative abilities of men and women and their self-assessments, and their explanations should be subjected to a content analysis.

Similarly, rather than focus on the outcome of performance as measured in final performance scores, research could examine the approach to and/or avoidance of performances and the changes in performances over time. As indicated previously, this would require better tests of performance than are provided by criterion tests as used in this study.

3.5.2.c Alternative Explanations

The limited utility of Bem's model in this setting may reflect more fundamental problems in how Bem defines and operationalizes the concepts of sex-typed and non-sex-typed.

For example, where a sex-type effect was found, that is, in performance, this was the case only for males though in the opposite direction to that predicted.

Generally, mean differences were larger among males than among females, and the standard deviations were consistently lower among females than males. That sex-type may have a greater influence on males than females has also been found by Helmreich et al. (1979) and Anderson (1978). Anderson (1978) has suggested that:

the socialization of females may promote specific behaviours...which are too invariant to be moderated by Bem's measure of sex-typing (p.414).

One of the difficulties identified previously is that Bem's concept of sex-typed is too complex, not only because masculine sex-typed individuals may differ from feminine sex-typed individuals, but also because the concept of masculine is itself factorally complex, containing at least two dimensions (independence and aggression). While Bem (1985) has emphasized the commonalities within the categories of sex-typed and non-sex-typed, future research might benefit from examining the differences between masculine and feminine sex-typed individuals and from exploring the implications of the two dimensions of masculinity.

As the role of women in Canadian society generally and in particular occupational settings such as the R.C.M.P. changes, the utility of Bem's model may diminish. Bem (1985) may be correct in her assertion that the BSRI taps relatively enduring cultural definitions of masculinity and femininity; however, as Deaux (1985) suggests, such a culturally-based definition may be inadequate to capture the increasing complexity of definitions of masculinity and femininity in contemporary society and in particular subcultural settings.

Thus, the issues raised by Markus et al. (1982), Baldwin et al. (1986) and Payne et al. (1987) with respect to Bem's definition of gender schema may have particular relevance. While some individuals may have gender schema which are culturally-derived and transmitted through early socialization experience, others may have gender schema which are more idiosyncratic, the result of how they have processed their own experience, and yet others may employ schema reflecting a particular subculture, for example an occupational group. Baldwin et al. might, therefore, argue that the distinction between sex-typed and non-sex-typed, in Bem's terms, does not provide a good basis for predicting perception and behaviour because the non-sex-typed category might well include individuals who are operating on the basis of "gender schema" that are not culturally-

derived and therefore cannot be captured by the B.S.R.I. Thus, the personal construct approach developed by Baldwin et al. may prove more useful in the police training setting.

3.5.2.d. Implications for Police Training

Because policing has traditionally been male dominated, it has a kind of built-in sex-saliency, which is heightened in the specific training situation because men and women are trained separately, provided different uniforms, selected on the basis of different standards and assessed against different fitness standards. To reduce the saliency of sex, consideration must be given to reducing or eliminating the institutionalized differences in how men and women are treated.

For example, the RCMP, in response to an internal study, is now examining equal fitness standards for male and female recruits (RCMP, 1987). The study indicates that both male and female recruits would prefer the use of standard tests for all areas, particularly in physical fitness, so that there can be no perception of "reverse discrimination".

Horne (1980) has argued that integrated training would help to reduce sex-saliency, and the influence of gender, in the police training situation.

Female recruits should not be coddled or just pushed through training...officers of both sexes have to be trained together, and all have to meet the same minimum performance standards. This factor of a shared group experience in training is one of the keys to reducing sexist attitudes in males and, therefore, it is imperative that male and female officers train together (Horne, 1980, p. 186).

Only when the saliency of sex in the training situation is reduced will it be possible to examine the more specific implications of sex-typing for recruitment and training. So long as gender is made the basis for separate treatment and standards, it remains difficult to ascertain whether the non-sex-typed or androgynous recruit would indeed make the ideal police officer as Horne appears to suggest.

Unless policing becomes more open to both femininity and masculinity, it will be difficult to know

whether androgynous policing and androgynous police can provide a new and effective approach to crime prevention and control. One can readily understand the reluctance within policing to give equal recognition to communion and agency, to the expressive as well as the instrumental. There are real risks and dangers in policing and frequent calls for strength and other physical qualities typically associated with men. Androgynous policing would represent a dramatic experiment. Perhaps the training situation can provide a natural laboratory for exploring such a new, and potentially fruitful approach.

3.6 CONCLUSION

Gender schema theory has been developed through extensive laboratory research on the effect of sex-type on perceptions and behaviour. Recent critiques of the theory (Payne et al., 1987; Baldwin et al., 1986; Markus et al., 1982) have suggested that Bem's emphasis on cultural stereotypes and sex-congruence is most appropriate for predicting behaviour in situations where cultural stereotypes predominate. The findings of this study suggest that if gender schema theory is to be applied to a natural setting where gender stereotypes are important and therefore where gender is salient, an approach quite different from that used in the laboratory must be

developed. Research must focus on how perceptions and performances are developed and change over time rather than on only perceptions and performances themselves. Research must also examine the interaction between social situation and sex-typing. Given that Bem's model does not appear to apply in this particular setting, research should explore the relative utility of other approaches to sex-typing such as self schema and the personal construct approach.

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APPENDIX A

86-05-12

RECRUITS OF TROOP _____

Re: Study - Recruitment and
Recruit Training

I am seeking your participation in a study I have undertaken on recruitment and recruit training to fulfill the final requirements of the University of Ottawa for my Doctoral degree.

Participants' anonymity will be protected. You needn't provide your names. All papers will be numbered. Results will be aggregated and reported by identified groups NOT by individual. No data collected in this study will be placed on your personal files. Strict confidentiality will be maintained.

Participation in the study will involve filling in a brief self-rating scale and providing straightforward data on age, sex, education and work experience. Data on performance in selected areas of training which are routinely collected will be provided me by number NOT name. The final report will be made available to all participants and full details of the study will be provided on request.

Full participation in this study will ensure that the results are meaningful and that the Force too will benefit to the fullest extent possible. If you are willing to participate and would allow me access to the information specified, please sign in the space provided. Your co-operation is most appreciated.

Yours truly,



C/M F. Himelfarb,
i/c Training Methodology &
Evaluation Unit,
Training and Development Br.

I agree to participate in Mrs. Himelfarb's study.

SIGNATURE _____

DATE _____

APPENDIX B

NUMBER _____

AGE _____

SEX _____

EDUCATION _____
(last grade completed)

WORK EXPERIENCE _____

INSTRUCTIONS

On the following page, you will be shown a large number of personality characteristics. We would like you to use those characteristics in order to describe yourself. That is, we would like you to indicate, on a scale from 1 to 7, how true of you these various characteristics are. Please do not leave any characteristic unmarked.

EXAMPLE: sly

Mark a 1 if it is NEVER OR ALMOST NEVER TRUE that you are sly.

Mark a 2 if it is USUALLY NOT TRUE that you are sly.

Mark a 3 if it is SOMETIMES BUT INFREQUENTLY TRUE that you are sly.

Mark a 4 if it is OCCASIONALLY TRUE that you are sly.

Mark a 5 if it is OFTEN TRUE that you are sly

Mark a 6 if it is USUALLY TRUE that you are sly.

Mark a 7 if it is ALWAYS OR ALMOST ALWAYS TRUE that you are sly

Thus, if you feel it is sometimes but infrequently true that you are "sly", never or almost never true that you are "malicious", always or almost always true that you are "irresponsible", and often true that you are "carefree", then you would rate these characteristics as follows:

Sly	3
Malicious	1

Irresponsible	7
Carefree	5

1 2 3 4 5 6 7
 NEVER OR USUALLY SOMETIMES BUT OCCASIONALLY OFTEN USUALLY ALWAYS OR
 ALMOST NEVER NOT INFREQUENTLY TRUE TRUE TRUE TRUE ALMOST
 TRUE TRUE TRUE ALWAYS TRUE

Self reliant	
Yielding	
Helpful	
Defends own beliefs	
Cheerful	
Moody	
Independent	
Shy	
Conscientious	
Athletic	
Affectionate	
Theatrical	
Assertive	
Flatterable	
Happy	
Strong personality	
Loyal	
Unpredictable	
Forceful	
Feminine	

Reliable	
Analytical	
Sympathetic	
Jealous	
Has leadership abilities	
Sensitive to the needs of others	
Truthful	
Willing to take risks	
Understanding	
Secretive	
Makes decisions easily	
Compassionate	
Sincere	
Self-sufficient	
Eager to soothe hurt feelings	
Conceited	
Dominant	
Soft-spoken	
Likable	
Masculine	

Warm	
Solemn	
Willing to take a stand	
Tender	
Friendly	
Aggressive	
Gullible	
Inefficient	
Acts as a leader	
Childlike	
Adaptable	
Individualistic	
Does not use harsh language	
Unsystematic	
Competitive	
Loves children	
Tactful	
Ambitious	
Gentle	
Conventional	

APPENDIX C

NUMBER _____

i.

RECRUIT QUESTIONNAIRE

The purpose of this questionnaire is to help in defining the training needs of recruits to the R.C.M.P. All of your responses will be treated in absolute confidence and your anonymity will be preserved. It is crucial to this study that you try to answer each question as fully and as honestly as you can. It is also important that you refrain from discussing this questionnaire with other recruits or trainers so that you do not influence their responses. Thank you for your co-operation.

1. On a scale of 1 to 7, where 1 is poor and 7 is excellent, how would you rate your performance in 'use of firearms', 'interviewing' and 'crisis intervention'. Please circle the most appropriate number for each subject area.

	Poor					Excellent	
i. Use of Firearms	1	2	3	4	5	6	7
ii. Interviewing	1	2	3	4	5	6	7
iii. Crisis Intervention	1	2	3	4	5	6	7

11.

2. Circle the number on the scale from 1 to 7 which best describes the extent to which you agree with the following statement:

'There are consistent differences between the abilities of men and women in the recruit training situation'

One indicates 'strongly disagree' and 7 indicates 'strongly agree'

Strongly disagree

Strongly agree

1

2

3

4

5

6

7

iii.

3. Circle the number on the scale from 1 to 7 which best describes your view of the extent to which male recruits or female recruits are more able in the areas of 'firearms use', 'interviewing' and 'crisis intervention'. One indicates male recruits are much more able than female recruits; 4 indicates that male and female recruits are equal in ability; and, 7 indicates that female recruits are much more able than male recruits.

If you indicate that one sex is more able than the other in a particular area, explain in the space provided.

i. Use of firearms

male recruits are much more able	male and female recruits are equally able	female recruits are much more able
1 2	3 4	5 6 7

Explain _____

ii. Interviewing

male recruits are much more able	male and female recruits are equally able	female recruits are much more able
1 2	3 4	5 6 7

Explain _____

iii. Crisis Intervention

male recruits are much more able	male and female recruits are equally able	female recruits are much more able
1 2	3 4	5 6 7

Explain _____

iv.

- 4A. To what extent do you perceive sexism to be present in the R.C.M.P. Recruit Training Situation? Circle the number on the scale from one to seven that best describes your view. One indicates non-existent and seven indicates widespread.

Non existent

Widespread

1

2

3

4

5

6

7

- 4B. Please explain briefly why you answered the way you did.

APPENDIX D

SAMPLE CRITERION TEST QUESTIONS

Interviewing: Model Questions

1. List and explain the five basic tools involved in an interview.
2. What four objectives should a peace officer keep in mind in communicating with an individual who has just been informed of the death of a loved.
3. Read the following scenarios and answer the questions below.

A. Suicide Threat

Wife finds suicide note written by husband. Husband not home, she is hysterical. Police arrive, husband shows up after a few moments. He seems depressed but denies he was serious. Eventually breaks down, cries and admits it. Tells life story of problems and lets it all out. Note says,

Dear Rhonda,

Forgive me taking the easy way out, but I did it for you. Remember I love you. Please don't blame yourself, it wasn't your fault.

Love You Always!
Chris

- A. 1. What are five "primary questions" you would ask in the situation? Why?
2. How would you attempt to replace the defensive climate with a supportive climate? Identify at least three techniques.
3. Describe how you would use a "win win" strategy?

B. Scene I - Lost Dog

Psychological Analysis

The two officers have just come from a difficult and frustrating domestic dispute. The passenger is still on edge. He wants to relax with a cup of coffee before taking another call. The driver is also a little tense, but is less bothered by the last call than his partner is.

The boy sees the police car and has some hope. Policemen help people; maybe they will help him find his dog. He's a little scared because he has never talked to a policeman. But he musters up his courage and calls to the first officer. He hopes for some sympathy and some reassurance. He hopes they will tell him that they know where his dog is.

- B. 1. What do you think the boy wants? What is his emotional state?
2. What would you do or say if you were the officer?
3. What would be the objective(s) of your communication with the boy?
4. In the course of an interview, the statement: "I can imagine how you feel" is an example of:
- a. an empathetic statement.
 - b. a directive approach.
 - c. a non-directive approach.
 - d. a probe.
5. In the following example, indicate the more appropriate probe.
- Example: Interviewer: How do you like the men you work with?
- Respondent: They're O.K. You know, things aren't always smooth when you work with guys all the time.

Possible probes:

- a. They're a tough bunch to work with?
- b. What exactly is the problem?
- c. But, it's mostly O.K.?
- d. Tell me more about it.

SAMPLE CRITERION TEST QUESTIONS

Crisis Intervention: Model Questions

1. List the major steps of intervention in a crisis situation and fully explain each step.
2. Identify and fully explain the major steps upon arrival at a hostage incident.
3. Read the following scenarios and answer the questions below.

A. Domestic

H/W fighting in home. Husband out all night. Wife angry and suspicious of him cheating. No evidence to support suspicions. Husband co-operative and rational. Wife highly emotional. Next door neighbour, complains of disturbance.

- A. 1. State at least three elements of risk in the situation.
2. What six specific steps would you take to gain control of the situation.
3. What six qualities or attitudes must a peace officer have for effective intervention in this situation. Give examples of how these would be important in this situation.

B. Barricades/Baby/Knife

Husband or wife barricades self in a room with baby. Has knife, won't let anyone near. Seems to have totally lost control. Thinks everyone is evil and against him/her.

- B. 1. State at least three elements of risk in the situation.
2. What six specific steps would you take to gain control of the situation.
3. What six qualities or attitudes must a peace officer have for effective intervention in this situation. Give examples of how these would be important in this situation.

4. If a police officer is alone, managing a domestic dispute he should:
 - a. deal with the least aggressive person first.
 - b. deal with the most aggressive person first.
 - c. threaten to arrest both.
 - d. be prepared to rely more heavily on the use of force.

5. In separating combatants in a marital dispute, the peace officer should generally:
 - a. remove the woman to another room.
 - b. remove the man to another room.
 - c. move the most emotional to another room.
 - d. move the least emotional to another room.

APPENDIX E

APPENDIX E

BSRI raw scores and classification

KEY: OBS = Observation
 RSFEMLO = raw score on the BSRI femininity scale
 RSMASCLO = raw score on the BSRI masculinity scale
 NOCSLOMS = for Stanford sample (combined sex).

OBS	RSFEMLO	RSMASCLO	NOCSLOMS
1	5.15	5.90	ad
2	5.10	6.50	ad
3	5.25	4.75	fe
4	4.80	5.40	ma
5	4.80	3.90	un
6	5.30	4.90	fe
7	4.95	5.60	ad
8	4.05	3.40	un
9	4.50	5.65	ma
10	4.30	5.30	ma
11	5.45	4.60	fe
12	4.35	5.00	ma
13	6.60	4.40	fe
14	5.60	5.65	ad
15	4.10	5.85	ma
16	5.40	5.95	ad
17	5.25	5.45	ad
18	4.65	3.55	un
19	6.00	6.00	ad
20	5.05	5.55	ad
21	5.65	4.80	fe
22	5.55	4.90	fe
23	4.65	5.45	ma
24	3.80	5.35	ma
25	5.45	5.05	ad
26	5.40	5.20	ad
27	5.10	5.45	ad
28	5.30	6.20	ad
29	3.90	6.20	ma
30	5.35	5.40	ad
31	4.60	4.40	un
32	4.35	4.95	ma
33	4.80	4.60	un
34	4.35	5.30	ma
35	4.35	4.70	un
36	5.00	5.45	ad
37	4.70	5.25	ma
38	4.75	4.40	un
39	4.55	5.60	ma
40	5.30	5.90	ad
41	5.15	5.40	ad
42	4.85	5.30	ma
43	4.80	5.30	ma
44	4.70	5.65	ma
45	4.75	5.25	ma

BSRI raw scores and classification

OBS	RSFEMLO	RSMASCLO	NOC SLOMS
46	4.60	5.50	ma
47	4.60	4.50	un
48	4.90	5.75	ad
49	4.25	5.50	ma
50	3.45	5.25	ma
51	5.00	5.30	ad
52	5.05	5.05	ad
53	4.65	4.95	ma
54	4.70	5.00	ma
55	5.20	5.75	ad
56	4.10	5.10	ma
57	5.50	5.65	ad
58	5.20	5.50	ad
59	4.30	5.60	ma
60	4.85	5.55	ma
61	5.10	5.90	ad
62	4.70	5.30	ma
63	4.45	5.60	ma
64	4.70	5.30	ma
65	5.25	5.80	ad
66	4.20	5.75	ma
67	3.90	5.60	ma
68	5.05	5.20	ad
69	4.25	5.50	ma
70	4.40	5.35	ma
71	4.70	6.00	ma
72	4.00	5.95	ma
73	4.70	5.15	ma
74	3.85	5.40	ma
75	4.60	5.10	ma
76	4.15	4.55	un
77	5.05	5.35	ad
78	5.60	5.85	ad
79	4.45	4.50	un
80	5.35	5.15	ad
81	4.70	5.65	ma
82	5.35	5.10	ad
83	4.55	4.85	un
84	4.70	5.25	ma
85	4.70	5.70	ma
86	4.95	5.45	ad
87	4.85	6.70	ma
88	4.65	6.25	ma
89	4.60	5.15	ma
90	3.45	5.20	ma
91	5.25	5.95	ad
92	4.70	5.50	ma
93	5.35	4.05	fe
94	4.65	5.85	ma
95	5.25	5.60	ad
96	5.00	5.10	ad
97	5.40	4.85	fe
98	5.35	5.70	ad
99	4.25	3.95	un

BSRI raw scores and classification

OBS	RSFEMLO	RSMASCLO	NOCSLOMS
109	4.25	4.90	un
110	2.80	6.30	ma
111	5.25	5.20	ad
112	5.00	5.55	ad
113	4.90	5.60	ad
114	5.15	5.25	ad
115	4.85	6.10	ma
116	5.50	4.30	fe
117	5.60	4.80	fe
118	5.20	4.55	fe
119	5.15	5.55	ad
120	4.80	5.05	ma
121	4.85	4.40	un
122	4.85	5.95	ma
123	5.30	5.95	ad
124	4.90	3.95	fe
125	5.05	6.40	ad
126	4.30	4.80	un
127	5.22	5.95	ad
128	4.65	6.15	ma
129	5.15	4.95	ad
130	5.70	5.70	ad
131	5.90	4.20	fe
132	5.30	5.70	ad
133	4.30	5.75	ma
134	5.20	5.40	ad
135	4.65	5.50	ma
136	5.45	4.20	fe
137	4.60	5.90	ma
138	4.90	6.10	ad
139	5.25	5.70	ad
140	4.25	4.95	ma
141	5.15	4.80	fe
142	4.35	5.05	ma
143	4.85	4.85	un
144	4.95	6.15	ad
145	5.90	5.20	ad
146	5.65	5.45	ad
147	4.80	5.00	ma
148	4.40	5.70	ma
149	3.30	4.75	un
150	5.05	4.85	fe
151	5.60	4.90	fe
152	5.10	5.35	ad
100	4.80	5.30	ma
101	4.85	5.40	ma
102	4.80	5.45	ma
103	5.25	5.05	ad
104	4.00	5.20	ma
105	5.60	4.90	fe
106	5.50	5.45	ad
107	5.20	5.90	ad
108	4.40	6.55	ma

Self-assessments and Objective Performances: Raw Scores

KEY: OBS = Observation
 RSRF = Recruits' self-assessment in Firearms
 RSRI = Recruits' self-assessment in Interviewing
 RSRCI = Recruits' self-assessment in Crisis Intervention
 ORF = Recruits' Performance in Firearms
 ORI = Recruits' Performance in Interviewing
 ORCI = Recruits' Performance in Crisis Intervention

OBS	RSRF	RSRI	RSRCI	ORF	ORI	ORCI
1	5	6	5	78	92	100
2	6	5	7	82	78	97
3	4	5	4	92	92	88
4	5	5	6	81	85	96
5	5	4	5	80	100	95
6	6	5	5	90	96	88
7	4	4	5	80	100	96
8	6	6	4	87	100	91
9	2	4	6	76	96	90
10	4	5	4	74	85	97
11	5	5	6	84	59	94
12	1	5	5	80	92	87
13	5	5	4	75	96	94
14	6	5	7	79	85	83
15	5	5	4	87	96	91
16	5	5	5	79	92	94
17	6	6	6	91	100	97
18	5	5	5	89	100	96
19	4	2	4	82	100	93
20	7	5	5	88	100	96
21	5	4	4	83	96	97
22	5	4	4	91	85	95
23	4	4	4	83	78	89
24	6	6	6	84	89	91
25	5	3	5	89	100	96
26	5	5	4	80	74	95
27	5	5	5	80	89	89
28	5	5	5	83	96	97
29	5	5	6	84	85	85
30	6	5	6	86	70	89
31	1	4	3	77	85	94
32	5	7	4	85	92	96
33	6	4	6	94	44	65
34	5	6	5	87	92	85
35	5	2	7	94	96	97
36	5	5	6	89	88	93
37	5	4	4	86	92	94
38	6	5	5	82	100	95
39	6	5	6	87	96	90
40	5	4	5	92	77	95
41	5	5	6	82	59	91
42	4	4	7	93	88	96
43	5	4	4	80	66	93
44	6	5	6	87	77	82
45	6	6	7	87	100	96
46	6	5	5	87	92	96

Self-assessments and Objective Performances: Raw Scores

OBS	RSRF	RSRI	RSRCI	ORF	ORI	ORCI
47	6	5	5	88	88	95
48	6	5	5	89	77	80
49	7	4	5	90	59	93
50	6	6	7	91	96	93
51	6	5	5	89	62	94
52	7	5	5	88	81	96
53	5	5	6	75	40	83
54	6	4	4	94	96	94
55	5	6	7	78	92	95
56	6	5	5	67	59	90
57	6	6	5	84	92	95
58	6	5	5	91	88	85
59	5	5	5	92	92	90
60	6	5	6	88	62	87
61	7	5	5	92	96	89
62	6	6	5	65	88	85
63	5	6	6	62	88	86
64	5	5	6	81	100	90
65	6	6	6	90	92	87
66	5	4	6	85	100	97
67	7	5	5	89	62	83
68	6	4	5	96	85	88
69	3	7	6	77	85	95
70	5	5	5	83	92	85
71	5	6	5	85	81	93
72	6	5	4	84	70	83
73	5	4	4	93	100	100
74	6	4	5	83	100	98
75	4	5	5	78	77	93
76	6	5	5	96	81	91
77	6	5	5	88	66	93
78	6	5	5	95	96	94
79	5	5	5	92	48	75
80	6	5	5	90	74	62
81	6	5	6	82	81	75
82	6	5	6	87	85	95
83	6	3	6	94	85	90
84	7	4	4	95	96	97
85	6	5	5	86	81	83
86	7	5	5	83	92	96
87	2	6	6	82	81	94
88	6	5	6	90	100	97
89	4	5	5	84	85	88
90	4	3	4	88	100	100
91	7	6	6	93	77	87
92	5	4	5	83	88	94
93	5	4	5	88	88	94
94	5	7	5	85	96	95
95	5	6	6	86	100	98
96	5	5	6	77	74	91
97	5	5	6	82	92	98
98	3	5	6	87	100	97
99	5	5	6	81	74	88

Self-assessments and Objective Performances: Raw Scores

OBS	RSRF	RSRI	RSRCI	ORF	ORI	ORCI
100	5	5	5	89	85	86
101	5	5	5	84	100	93
102	7	6	6	86	85	68
103	5	6	6	92	100	95
104	6	2	4	87	100	97
105	5	5	5	90	88	85
106	6	5	5	87	100	98
107	4	6	6	88	92	82
108	6	4	5	90	81	91
109	6	6	6	86	96	98
110	6	5	6	81	77	75
111	6	5	6	85	96	89
112	4	5	6	82	96	97
113	5	5	5	72	92	80
114	5	5	6	79	96	97
115	5	6	5	89	85	95
116	7	2	4	90	96	89
117	5	4	4	79	81	80
118	5	6	6	72	85	100
119	5	6	6	86	66	88
120	6	5	6	84	62	87
121	6	5	6	95	96	91
122	6	4	5	98	96	86
123	5	7	6	79	88	83
124	4	5	5	74	77	91
125	7	6	6	95	96	68
126	5	5	5	79	62	88
127	5	3	5	80	96	98
128	5	5	5	89	100	91
129	5	5	5	86	100	96
130	7	4	4	91	92	98
131	6	5	7	78	70	90
132	5	6	6	82	85	89
133	6	5	5	90	88	97
134	7	5	5	82	70	90
135	5	3	2	71	81	100
136	6	5	4	91	100	95
137	6	6	5	82	92	93
138	7	4	4	88	85	94
139	5	5	5	82	92	90
140	4	4	4	80	96	94
141	6	7	7	81	96	97
142	6	5	5	86	88	96
143	6	5	5	81	96	95
144	6	6	6	91	100	96
145	7	1	2	83	96	96
146	4	5	5	83	85	96
147	6	6	6	82	88	90
148	4	4	5	77	88	90
149	6	5	5	95	77	91
150	5	4	4	84	74	90
151	5	5	5	79	96	94
152	5	6	6	76	92	90

Perceptions of Relative Ability: raw data

KEY: OBS = Observation
F = response on 1-7 scale of relative ability of
males and females in Firearms
I = response on 1-7 scale of relative ability of
males and females in Interviewing
CI= response on 1-7 scale of relative ability of
males and females in Crisis Intervention

OBS	F	I	CI
1	4	5	3
2	4	5	6
3	4	4	6
4	4	5	4
5	4	4	4
6	4	4	4
7	4	4	4
8	3	5	4
9	4	4	4
10	4	5	6
11	4	5	6
12	4	2	6
13	3	5	5
14	4	5	5
15	4	5	3
16	4	4	4
17	4	5	6
18	4	6	4
19	4	4	4
20	4	5	3
21	4	6	4
22	4	6	4
23	4	4	4
24	3	6	4
25	3	4	4
26	4	5	5
27	4	5	6
28	4	4	4
29	3	4	4
30	2	4	3
31	4	4	4
32	4	4	3
33	4	4	2
34	4	4	4
35	3	4	4
36	2	4	2
37	3	4	3
38	2	3	3
39	2	4	5
40	2	4	2
41	1	3	1
42	3	4	2
43	2	4	3
44	3	4	3

Perceptions of Relative Ability: raw data

OBS	F	I	CI
45	4	4	4
46	5	4	4
47	1	4	2
48	4	4	6
49	2	4	5
50	1	4	2
51	4	4	5
52	2	4	4
53	4	5	2
54	3	4	5
55	5	4	3
56	2	5	3
57	3	4	3
58	1	3	2
59	2	4	4
60	3	4	5
61	3	4	4
62	4	4	2
63	2	4	4
64	2	4	3
65	4	4	4
66	3	4	4
67	1	4	4
68	2	4	4
69	4	7	2
70	3	4	4
71	3	4	4
72	3	4	4
73	3	4	4
74	3	4	4
75	4	2	4
76	2	3	4
77	4	3	3
78	3	4	4
79	4	1	2
80	1	1	1
81	3	4	4
82	1	4	4
83	3	4	3
84	2	4	6
85	2	4	4
86	1	3	4
87	4	4	6
88	4	4	4
89	4	4	3
90	4	4	4
91	2	4	3
92	1	3	4
93	1	4	4
94	2	3	3
95	3	4	4
96	4	5	4
97	4	4	4
98	3	5	5

Perceptions of Relative Ability: raw data

OBS	F	I	CI
99	4	4	3
100	4	4	4
101	4	4	5
102	4	4	4
103	4	4	4
104	4	4	4
105	4	4	4
106	4	4	4
107	4	4	4
108	4	4	4
109	4	4	4
110	4	5	4
111	4	4	4
112	4	4	6
113	4	4	4
114	4	4	5
115	3	4	6
116	4	4	5
117	4	4	4
118	4	4	4
119	4	4	4
120	4	4	3
121	4	4	4
122	4	4	4
123	4	4	4
124	4	4	5
125	4	4	4
126	4	5	3
127	4	4	4
128	4	4	4
129	4	5	4
130	4	4	4
131	4	4	4
132	4	4	5
133	4	4	4
134	4	5	5
135	4	3	7
136	4	4	5
137	4	4	4
138	4	4	4
139	4	4	4
140	4	5	4
141	4	4	4
142	4	4	4
143	4	4	5
144	4	4	4
145	4	7	7
146	4	4	4
147	2	4	4
148	4	4	4
149	4	4	4
150	4	4	4
151	5	5	6
152	4	4	4