SUMMARY

The present investigation was designed to study the development of social norms among different personality and gender groups along with their learning and memory performance. A factorial design of 2 x 2 was employed in the present study. There were two conditions of personality, i.e. introverts and extraverts and two conditions of sex viz. males and females. In all there were 4 conditions/cells each consisting 25 subjects, thereby yielding a total sample of 100 subjects who were tested on perceptual and behavioural norm along with anagrams and serial positioning effect.

Selection of sample

1. Initial Sample  A sample of 500 students (250 males and 250 females) of university level was drawn randomly from Himachal Pradesh University, Shimla for the present study for the session 1998-99.

The subjects were taken in a group of 10-15 each. First of all they were administered the Eysenck's personality inventory (Eysenck and Eysenck, 1968) to obtain their personality scores on extraversion/introversion dimension. Instructions written on the top of the forms were read out loudly and clearly. They were told to start with the inventory after the administration of instructions. There was no time limit for EPI. On the
average subjects took 20 minutes to answer 57 questions. 24 questions, each were keyed for extraversion and neuroticism and rest of the nine questions constituted the lie scale.

2. Final sample The final sample of 100 subjects were selected on the basis of their scores on personality inventory. Students scoring between 8 to 12 on neuroticism were considered as medium neurotics and at the same time students scoring either +12 or -8 were termed as extraverts and introverts respectively consisting of half males and half females.

Thus, the design came out to be having 100 subjects with 4 groups, the layout of which i.e. 2 X 2 factorial design is presented in Table - 1 (stage were only for social influence under Sheriff's study for convergence effect).

Tools used

Eysenck Personality Inventory (EPI): Eysenck and Eysenck, (1968). EPI was used to select personality groups. Scoring was done with the help of scoring stencil. The psychometric properties of EPI in terms of its reliability and validity has been established in number of investigations carried out in India e.g. (Kumar, 1974; Kapila, 1992). For Indian samples reliability & validity
has been reported by various studies (Kumar, 1974) between .80 to .90.

**Autokinesis (Sherif, 1935)**

It is an instrument which is placed in a darkened room. The walls were not visible, nor were there any other physical frames of reference for the subjects. In this experiment, subjects were made to sit comfortably in a completely darkened room in a group of 4 i.e. 2 males and 2 females comprising of introverts and extraverts, looking at the patch of light moving/waving up and down. Their task was to judge how far the patch of light approximately moved as it followed its erratic course in the darkness. Readings were taken in 4 stages, then, after a week another reading was taken to see how the convergence effect is retained in introverts and extraverts and two sexes viz. males and females.

3. **Asch's line drawing cards**: (Asch, 1951).

Asch's line drawing cards (figure 20) were used with one card containing the standard line and the other three cards containing the comparison lines. In all 4 cards were used. In this test of visual perception, the naive subjects were made to sit with other six confederates of the experimenter around a table (see figure 20). Subjects in this experiment were first shown the standard card and then the comparison cards and they
were asked to identify which of the three comparison lines best matched the standard line. This procedure was repeated three times with different stimulus cards involving comparison lines. First, the confederates stated their judgements publicly one after another and in the last, the naieve subject stated his judgement. This experiment was done with all the 100 subjects to know the percentage yielding to group pressure among two sexes i.e., males and females and two personality groups viz. introverts and extraverts.


An anagram consists of several letters which are jumbled up and subject must rearrange them to form a meaningful word. In anagram's problem 15 jumbled up words with single, double and tripple shifts were given to the subjects to make them into meaningful words in 10 minutes. The standardized anagrams have been taken from Dominowski (1966) and adapted for Indian conditions by Sehgal (1990) and Kapila, (1992).

5. **Serial Positioning Effect (use of four letter nonsense syllables, Gamble, 1909, 1927).**

Herman Ebbinghaus (1885) developed this method of studying learning and memory. Here we have used diphthongs following the recommendations of
Gamble. In the diphthong generally between initial and final consonants two or a single vowel is used to avoid the anagram to look repulsive and in order to facilitate the subject to pronounce it better, the nonsense syllables (NSS's are the best source and material of learning as these do not have preestablished associations (Hull, 1943).

A list of 15 four letter nonsense syllables were made and arranged and then written down in series and the subjects were asked to memorize the list in the same order as it appeared in the series. This list was shown through the memory drum apparatus. After the list was exposed to the subjects, they were asked to recall the syllables in the same order as it appeared in the series. Trials were repeated until the subjects were able to recall the nonsense syllables correctly and in the same order.

Objectives

The present study has been undertaken to fulfill certain aims as given below.
1. The major aim of the investigation undertaken currently was to observe the variation in movement and perceptual relations (initial and final) in the two personality groups and sexes due to social pressure and interaction.
2. Another aim of the present investigation was to study the differences between two personality groups and
sexes on anagram solution of problem solving and serial positioning effect to know their vocabulary and performance based on social norms and empirical research.

The present problem was designed and in the light of meagre evidence and some indirect and presumed sources the main hypothesis for the main effects and their interactions were formed as given below. (The details of aims and hypothesis are already presented in chapter - III).

(1) Introverts would show lesser movement and strong retention of social norms in Sheriff's autokinesis because at the descriptive level they show more restrain in temperament, whereas, extraverts show more excitement. The principle of autokinesis is that in the absence of frame of reference, the patch of light seems moving as the pupil of the eye moves and the light's movement for extraverts would be more than introverts because extraverts due to their outward and casual disposition cannot pay close attention to most of the things, whereas, the introverts are on the opposite extreme, hence the movement would be lesser for them (Handa, 1994).

(2) On sex differences it can be presumed that females would show lesser movement of the patch of light and would show stronger retention of social norms because females are very sensitive and come to take their
tasks seriously even in the absence of frame of reference and thus the pupil of the eye moves steadily thereby showing lesser movement and after a week they i.e. females, would retain the norms better than males because of the expected behaviour i.e. when females digress from norms they are looked down upon and when males breach the norms, it is viewed as it being their prerogative, hence, females would show better retention of group norm than males (Kapila Malhotra and Sharma, 2000).

3. Introverts would yield to social pressure more in visual perception of Asch's line drawing cards than extraverts due to the fact that they i.e. introverts believe that going with the erroneous majority is called for in the situation.

4. Females would lead to social pressure more in visual perception of Asch's line drawing experiment than males because they believe that it is in conformity with the norm which is due to the fact of socialization practices and upbringing available to the two sexes. They are required to be obedient, submissive and thus yield more to avoid disagreement or conflict with others in the interests of group harmony, to win social approval and to ensure smooth interpersonal relations (Kapila Malhotra and Sharma, 2000).

(5) On Anagram problem solving, introverts would show superiority to extraverts due to their better vocabulary (Himmelweit, 1946).
(6) Females would perform better than males in anagram problem solving task due to their serious articulation, better vocabulary and better verbal facility (Kumar and Kapila 1992).

(7) Introverts would learn the nonsense syllables in serial order positioning affect significantly in lesser number of trials than extraverts because of their higher cortical arousal (Eysenck, 1967 and Kumar, 1974).

(8) Females would learn the nonsense syllables in serial order in serial positioning effect significantly in lesser number of trials than males because of their higher learning capacity due to their serious disposition towards the task (Kumar, 1974; Kapila, 1992 and Kapoor, 1997).

Means were calculated for the various conditions i.e. for two groups of personality and two groups of sex for each of the four experiments (see table - II).

To find out the significance of difference between the said means, ANOVA of the order of 2 X 2 was employed (Edwards, 1968), but for Sherif's autokinetic effect ANOVA of the order of 2 X 2 X (5) was employed and for the final reading i.e. for the 5th stage ANOVA of the order of 2 X 2 was employed. Thus in this way 5 analysis of variance for movement in inches, right responses and trials taken were calculated (for details see the section of results with ANOVA tables - III, VIII, XII, XV, XVI).
Results and Discussion

In the present investigation, the results on the variables of personality in Sherif's autokinesis are very much in accordance with the hypothesis framed earlier, the F-ratios being significant at .01 level (see ANOVA tables - III & VIII). On this variable, it was hypothesized that introverts would show lesser movement of the patch of light in Sherif's autokinesis than the extraverts and after a week would retain the norms significantly better than the extraverts because of their serious disposition and their higher cortical arousal which helps in warming up and also helps in paying close attention to the tasks at hand. Not only this they are geared to inspect and thus show lesser movement of the patch of light than the extraverts who are response hungry and show more variation in the judgement of movement.

On this variable in Asch's visual perception of line drawing experiment, the results are very much in accordance with the hypothesis wherein it was stated that introverts would come under pressure significantly more as compared to extraverts (see ANOVA table - XIII). They i.e. introverts, go along with the erroneous majority because this is what they consider as called for in the situation and secondly Eysenck, (1947) & Gray (1972) contends that introverts learn the social norms and expectations faster than extraverts.
Not only this on the variable of anagram solution and serial positioning effect, it was hypothesized that introverts would do better than extraverts because of their better vocabulary and serious disposition and the results are very much in accordance with the hypothesis stated above (see ANOVA tables XV and XVI). This is due to the fact that introverts excite quickly, accumulate (Ir) reaction inhibition slowly and dissipate it faster plus introverts have higher cortical arousal, which helps them to learn faster than extraverts.

The above said results are very much in line with the earlier investigations (Eysenck, 1959, 1967, 1970; Gray, 1972; Brebner and Cooper, 1974; Malhotra and Jerath, 1986; Kumar and Kapila, 1987; Kumar and Kumari, 1988 and Handa, V., 1994).

II On the variable of sex in Sheriff's autokinesis ALSO the results are very much in accordance with the hypothesis framed earlier (see ANOVA tables III and VIII). On this variable it was hypothesized that females would show lesser movement of the patch of light and better retention of social norms than their counterparts i.e. males in Sheriff's autokinesis. This is due to the fact that females fail to assert their independence and yield more whereas males are given freedom throughout their life from the very beginning and that is why when females break the norms they are looked down upon and when males breach the norms, it is viewed as being their
prerogative. Thus, this is the reason why females show convergence and retention of social norms more than males. These results are in line with the earlier studies (Crutchfield, 1955; Sistrunk and McDavid, 1971, Baron and Byrne, 1988; Handa, V. 1994 and Kapila Malhotra & Sharma, 2000).

On this variable in Asch's visual perception of line drawing experiment, it was hypothesized that females would yield to group pressure significantly more than the males because they believe that yielding to pressure is in conformity with the norms. Not only this, this is also due to the fact of socialization practices and upbringing available to the two sexes. Socialization practices lead to gender discrimination and gender schemas. They are deprived of education, medical treatment etc. Thus, females lack of educational opportunities puts additional pressure on them to conform to the regulated behaviour and secondly in order to win the approval of the social group formal or informal they are required to be more and more obedient even if it is wrong. This is also due to far of success because young women who succeed in school and in their jobs may feel torn between the rewards of success and the cultural norm that devalues achievement for females. If they want a career, they may fear success because they will loose friends or be unable to marry. Thus, fearing social rejection as a result of achievement, females may not perform as well as they can and thus
avoid dealing with the conflict by yielding to social pressure than their counterparts i.e. males. These results do find the support from earlier studies (Crutchfield, 1955; Horner, 1968, 1972, 1974; Sistrunk and McDavid, 1971; Bem, 1987; Baron and Byrne, 1988; Kumar and Kapila, 1987; Ohri and Malhotra, 1989; Kapila, 1992; Handa, V., 1994; and Kapila Malhotra and Sharma, 2000).

On this variable in anagram solution and serial positioning effect, the results are not in accordance with the hypothesis framed earlier wherein it was stated that females would do better than males due to their serious articulation and better vocabulary. This is clear from F-ratios which are not significant and the hypothesis stand disproved (see ANOVA tables for F-ratio - XV & XVI), but trend of means show that females perform slightly better than males.

III. The three order interaction between Personality X Sex X Stages is significant at .01 level (for F-ratios see table - III and for t-values see table VII. The two level interaction between Personality X Sex, Personality X Stages and Sex X Stages could be taken care by the three factor interaction of Personality X Sex X Stages. The three order interaction show that from stage I to V, introverts and females are moving towards conformity behaviour that is they show more conformity by showing comparatively more movement by moving towards convergence for the formation of norms whereas,
extraverts and males in the second stage show lesser movement but again steadily rise towards the initial stage i.e. from where they started and this is further borne out by the fact that after a week extraverts and males drift more and introverts and females show more retention of group norms.

IV The interaction between Personality X Sex in Asch's visual perception of line drawing experiment is also significant at .01 level (see ANOVA - Table XII for F-ratio). The interaction depicts that at the level of introversion the difference between males and females is not significant whereas at the level of extraversion the difference between males and females is more pronounced. Similarly the difference between introverts and extraverts at the males end is more marked and sharp than at the females end where the difference is not significant. Thus, the said interaction reveals that introverts and especially females irrespective of their personality dimension came under group pressure significantly more directly or indirectly (see table - XII and figure 29 a and b parts).

Qualitatively how much you are an introvert or extravert, a basic issue in question is specific situation that what it matters. So extraverts will abide at one point and drift from that on the other. Whereas, introverts show their convergence at all the points. Extraverts do not come under group pressure because they do not consider it to be a norm that is why they do not abide by the norm.
Whereas, for introvert if it is right or wrong or rain or shine they carry it out in letter and spirit.

The delicate balance in the society is maintained as norms are not always based on logic and reasoning. The basic purpose of social norm is to weave the society together and females play a pivotal role in preserving the norms of society and save it from chaos and great disorder. The present results throw light on the dynamic thinking of women/females.