CHAPTER V

DISCUSSION
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Findings revealed upon analysis, in the preceding chapter have been interpreted and explained in the present chapter - the material is organised along the lines of three major objectives. Besides the limitations scope and suggestions for further research have also been appropriately marked.

The foremost objective of the study was on the exploratory front since there was complete gap on the subject understudy. However belief in other areas have been found to be studied in India e.g. study on life belief, religiosity, God and self efficacy belief (Thingujam and Ram, 1999; Mathew and Ram, 1999; Kanwar et al., 1999). The existence and extent of belief in heredity - environment for human characteristics was accounted in a fairly representative sample of population amounting to more than 1000 cases. Findings revealed the distribution which deviated from normality however majority of the statistics was close to the normal parameters, the notable deviance was a little depression around the mean, technically termed as platykurtic. Since the ratings on determinants of the characteristic in terms of heredity - environment or both represented a three point scale, balanced being at number two heredity being at number one environment at number three. Thus scale comprising 20 characteristics was aggregated thereby should have a perfect mean of 40, the observed mean was very close to it
i.e. 39.85. Thus it can be concluded that majority of the subjects were balanced believers i.e. they equally held environment and heredity responsible for the expression of a characteristic. It suggests that there is no cultural embedding either in the favour of heredity or environment. It would be notable to mention that western science and philosophy is specifically inculcating the belief that human characteristics are largely determined by environment. Despite the contrary scientific evidence (Fletcher, 1991) rather it is emerging as a social value that one's characteristics should be ascertained to environment. However, ancient Vedic philosophy particularly the ayurvedic thinkers e.g. Charak and Sushruta have considered that much of the temperamental traits and related behavioural traits are determined by genetic endowment, dosha (Shastri and Chaturvedi, 1989).

Despite the fact that a major chunk of the population uses a balanced strategy of both the determinants in ascribing the human characteristics (it being their naive estimate and they do not mean balanced as heredity and environment interaction), but a sizeable pocket on both ends also emerged with an occurrence of about 10% of the population. Therefore, it can be concluded that common or societal belief in terms of hereditical determinant of human characteristic and environmental determinants of human characteristics. Bar Tal (2000), a major belief worker, has clearly described the dynamics that how the common belief comes into existence through the sharing of information. The societal beliefs are also enduring and therefore
belief in heredity / environment should be perceived as a potential area of further study. It can also be suggested that the extreme group designs should be preferred in study due to the overlapping of both kinds of beliefs in the balanced group. Further, belief specific to characteristic may be operationalized for the perception of that very specific characteristic. Therefore characteristic specific group should be identified and studied for self and others perception. In addition to this if we want to take more characteristics these may preferably be taken from a single domain.

Once proven that belief in heredity - environment for human characteristic does exist with the extent of 20% of population, with almost equal occurring on heredity side and environment side. Variation does exist in the population and therefore the question arises that what factors are responsible for this variation. It was found that education leads to environment orientation. Whereas as we mature we tend to be heredity oriented, female tend to be heredity oriented, low social class tend to be environment oriented than high class, only these demographic determinants could be explored. The findings on European sample also reveal that these determinants influence the belief in the same direction (Furnham et al., 1985; Van Kampen et al., 1990; Meerum Terwogt et al., 1993). Despite cross-cultural variation the association of the determinants appears to be baffling this issue may be further explored and studied across the cultures. Fuller's (1996) description somehow offers a dynamics in terms of social
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epistemology where the cognition is produced by agents who are not merely individually embedded but also collectively embedded in certain specific relations that extend over large chunks of space and time. Though the findings on the determinants emerged to be statistically significant but looking to the absolute mean differences between group were very weak (e.g. Table 5.2a, 5.3a, 5.4a, 5.5a). No where the differences exceeded two units on a rating scale of 20 to 60. One of the inherent problem in exploring the social demographic determinant is that people differ along several demographic variables while assessing the impact of a particular demographic variable, other variables are simply ignored, whereas their impact should be controlled.

The next objective of the study was to explore the effect of one’s belief in heredity - environment on his or her own perception along a set of characteristics. Groups varying in their belief rated themselves on 20 characteristics and six values. It was found that one’s belief in heredity - environment significantly influenced the perception of three characteristics and one value namely activity / energy, numerical ability, balanced body - weight and aesthetic value. In all the cases it was found that balanced believers perceived to be more energetic, to have better numerical ability and the balanced body weight than heredity believers and environment believers. Balanced believers also rated themselves to be high on aesthetic value than heredity as well as environment believers. The findings can be explained
along the lines of the triangle hypothesis by Kelley and Stahelski (1970). This hypothesis has been studied across cultures and it has been found that the person's cognition is influenced by one's belief. Balanced believers in our sample held a belief that one's characteristic is determined by heredity as well as environment. Therefore they perceived themselves positively on certain characteristics. This may be due to their perceived additive advantage of both the determinants. On the other hand heredity / environment believers, believe that one's characteristics are determined by heredity / environment alone and therefore they have rated themselves lower than the balanced believers. However from the available literature direct studies implicating heredity and environment as major independent variable in relation to self-perception could not be traced but three important researches showing an interaction of belief in heredity and environment and the self-efficacy belief may be cited e.g. Soodak and Podell (1996) demonstrated in teachers that if they believed in hereditical determination of their pupil's performance, they tend to show a poor efficacy in handling their students. Similarly a study in women volunteers on a weight control programme (Blackburn, 1996) found that belief about biology and genetics was one of the dominant theme for obesity management programme. Blackburn reported an interesting interaction between belief in biology / genetic and self efficacy to maintain desirable weight. Those who believe that obesity is due to genetics they reported poor self efficacy and control.
Baumrind (1993) also reported that belief in heredity in regard to the children's development affected parent's belief. It undermined parents' belief in their own effectiveness and ultimately, effected their caregiving behaviour.

The final objective was to see the belief in heredity - environment on the perception of others traits and characteristics. The person-perception was in terms of written protocol format describing their environmental background and the social class. The control of the information of the stimulus and the perceiver was controlled. It has been repeatedly shown that the written description of the stimulus yielded comparable impressions (Singh, 1980; Gupta 1980; Singh, 1988). Findings in this section converged on variables of social class and the background information of the protocols which consistently influence the perception of various characteristics (19 characteristics). Interestingly this the perception of high social class in a deprived condition was most positive, seconded by a low social class with enriched environment background. The poorest impressions were exhibited for the character with low social class with deprived background see summary Table 5.54, 5.9 for such a pattern of person perception. The fact that the interaction between the social class (caste) and the environment background consistently influence the perception of others across characteristics may be interpreted with underlined genetic and environment interaction. The highest rating to a deprived Brahmin revealed that subjects attributed their traits to the caste *perse*. Since caste is an endogamous group
it might have been perceived as a separate genetic group. On the other hand ascribing positive feature of a Harijan to its environment might have been perceived that low social class had poor genetic potentiality. Thus subjects actually integrated the information available about the caste and the background information to make a judgement. These findings were over and above the belief in heredity-environment variable. The person perception of the subjects appears to be guided by external information and integration (Anderson 1981, 82, Singh 1988). The perception guided by external information further strengthened by looking into individual characteristics e.g. reversal was seen in case of low aggression and body weight where Harijan with a deprived background was rated as best. It can be attributed to the poor availability of food and prevalent oppressive social conditions in case of low aggression. One's belief in heredity-environment has been found to influence the ratings of perception of others characteristics, though the effect was limited to three characteristics namely linguistic ability, creativity and balanced body weight. The direction of effect was common, balanced believer perceived others to have better linguistic ability, high creativity and balanced body weight in comparison to heredity believers and environmental believers. Similar directional trends were observed in self perception also. Thus variance due to heredity - environment belief can be explained along the same lines that balanced believers use an additive strategy while rating
the characteristics in the sense that the role of genetic in the characteristics plus the role of environment in the expression of the characteristics tend to rate them to a better position.

The theoretical support to these findings can be extended from the effect of personal characteristics of the cognition of person by Kelley and Stahelski (1970), it has also been clarified in other contexts (Mishra and Karlo, Singh 1976). Body weight as a characteristic was found to be influenced by heredity / environment belief in interaction with social class and environmental factors. The interaction revealed that the balanced believers were biased toward high class Brahmin despite the fact that they were brought up in deprived environment. This dynamics was mainly responsible for a significant higher order interaction as well as first order interaction. Heredity / environment belief effect turned out to be very weak in case of low caste and enriched perception. In regard to creativity the belief in heredity / environment interaction with environmental background where it was observed that environment believers perceived higher creativity under deprived conditions, it seems that environment oriented believers outweigh the social class factor and stressed on the environmental background. They also appear to show a positive bias to compensate deprived background, it appeared in their view, that creativity flourishes under compulsions. Linguistic ability was also found to be rated better in deprived condition than
the enriched environmental condition by the balanced believers, thus it can be concluded that the main effect described earlier can be largely attributed to environmental component.

The effect on egocentricity rating was significant for interactive effect of heredity / environment belief and social class was though significant but when further analysed, it was revealed that the effect of heredity and environment belief for low social class and high social class was non significant. Balanced believers also differ from heredity and environment while rating humour for low class characters whereas effect of heredity / environment belief was not significant for high class character. It might be due to a prevalent stereotype to lower class people and their behaviour as source of laughing. The ratings of reasoning ability were initially found to be influenced by interaction of heredity / environment belief, social class and environmental enrichment. However when broken down separately heredity / environment belief effect turned out to be null for all the four types of protocols. Similar dynamics effects were observed for altruism that despite the significant higher order effect belief and social class interaction was ineffective under enriched condition but effective under deprived condition when further broken down the effect of belief in heredity / environment was equally likely for low and high social protocols.

To sum up, the potency of belief in heredity / environment emerged as selective i.e. it was effective for few characteristics - creativity, body weight
and linguistic ability. Still restrictive effect of heredity / environment belief was also noticed in the perception of humour in lower class protocols. Interestingly enough the four characteristics cannot be categorized in a single class. Numerical ability and creativity belong to cognitive domain whereas body weight is a physical characteristic and humour can be considered as a personality characteristic. Thus it can be concluded that there is no general effect of heredity / environment belief on person perception. Moreover person perception was predominantly influenced by the social class and background environmental condition. Heterogeneity of the trait or characteristic at the time of perception might have interfered unidirectional mobility of judgmental processes.