SOME PSYCHOLOGICAL CORRELATES OF
THE SUBJECTIVE VALUE OF MONEY
The interest of economists in the subjective value of money is traditional. Orthodox economic analysis however stressed, not unexpectedly, the economic aspects of this problem and its interest, consequently, centered around value in exchange and value in use only. Till recently, the fact that human motives may have a role to play in the valuation of money was only vaguely recognized by individual economists, and this recognition was not been allowed to have an impact on formal economic thought. This often led to reification of data as well as of analysis. By banishing from its domain the human beings who exchange or use money, this model not only invited the criticism that its recognition of economic reality was partial, but also, by definition, led to a deductive rather than empirical approach.

The assumptions underlying this approach, are increasingly being challenged from outside the boundaries of formal economics. This challenge can be said to have led to four different, though partially overlapping, approaches. First, some psychologists have led evidence, albeit in a different context, to support the hypothesis that the perceptual image of money is partly a function of the subjective value or cathetic load which money carries in the perceiver. For instance, the observation that the size-perception of coins is a correlate of the individual's economic-class affiliation, demonstrated in a series of experiments can be said to be a special case where the affective component
influences cognitive dimensions of the internalised image of
money (see for example Postman, Bruner and McGinnis, 1948; for
review see McCurdy, 1956). Methodologically a more sophisti-
cated, even if an indirect, approach to the same problem is
that of the game theorists (see for example von Neumann and
Morgenstern, 1947, pp. 1-649) and psychologists trying to measure
the utility of money (see for example Preston and Baratta, 1948;
Mosteller and Nogee, 1951; Hurst and Siegel, 1956; Coombs and
Komorita, 1958). In both cases, choice strategies or decisions
making processes are studied as the crux of economic behaviour
and economic evaluation. Thirdly, in recent years, psychoeconomists
and economists have relied more and more on psychological inter-
pretations of changes in the value of money at the attitudinal
level. To cite some instances, Katona (1951), Lauterbach (1954)
and a number of their associates have emphasised the motivational
determinents of the consumers' valuation of money. Similarly,
amongst economists, Keynes (1936), Knight (1935), Mayo (1945)
and Griffin (1949) have dealt, even though implicitly, with the
attitudinal roots of money value. To give a more specific
instance, Keynes speaks about the manner in which human motives
influence liquidity preference and value of money for the indi-
vidual and, even attempts to spell out all the actual motives
involved. Similar attempts have been made by Rostow (1957) too.
Lastly, psychoanalysts and dynamically oriented clinicians have
taken a lively interest in the subject and have sought a clue to
the evaluation of money in its libidinisation -- a defensive
process which on its part, has been conceived of as a function
of the individual's psychosexual growth and the society's shared
It may be possible in future to organise and incidental studies into a series of plausible hypotheses, within an unified behaviourally-oriented conceptual system. For the present, this chapter reports a more humble approach. It assumes that the psychological needs, beliefs, and action-tendencies of the individual valuing, exchanging and using money can be conceptualised as a system and the psychological value of money can also be defined as the extent to which the individual's ego is able to accept money as need-gratifying, pleasant and/or leading to happiness. This experiment tried to develop a measure of this value and to find its correlates in aspects of the internalised image of money and in personality.

The basic substantive assumption of the experiment was that money, being a symbol, acquires it value not only from economic circumstances or social role and role-definitions of the valuer but also from the part which it plays in relation to the adaptive functions of the ego. For practical reasons, however, the experiment confined its attention to three aspects of this adaptive interaction between the individual and the external sociocultural reality of which this crucial instrument of economic exchange is but an important aspect. These were self concept, sexual identification, and conflicts about interpersonal aggression. The hypotheses involving these variables, somewhat arbitrarily derived from the earlier experiments of this study, specified that the value of money is associated with (1) adequacy of self concept, (2) clarity
of sexual identification, (3) conflicts about interpersonal aggressiveness, and (4) aspects of internalised image of money.

The actual arguments used to build up these hypotheses are less ad hoc than the predicted relationships apparently would seem to suggest.

The first hypothesis is closely related to the observed relationship between adequate self-image and economic status (see brief reviews in Bieri and Lobeck, 1961, and Nandy and Mitra, 1965; see also chapter 3) and the tendency in modern capitalist and quasi-capitalist competitive economic systems to generate feelings of guilt, anxiety and interpersonal inferiority in individuals who fail to accumulate or retain money or wealth. This is reflected even in the stereotypes of the rich and the poor (Luft, 1957; Nandy and Mitra, 1965; also chapter 4) and in the preferred ego-defences in the different social classes (Miller and Swanson, 1960). The proposed hypothesis assumes that, within a given social class, this trend of argument can be extended to include the individual's valuation of money. It specifies that undervaluation of money is essentially a defensive ego-position and can be causally linked to an inadequate self-image.

The second hypothesis was derived from the first and, actually, concretised an aspect of the more general relationship postulated above. It predicted that in an economy dominated and, in many ways, monopolised by the "male principle," poor self-image in men also includes poor perception of self in terms of idealised (and partially socially determined) aspects of their
sex-roles which carry the implications of high valuation of money and economic success. This line of argument can be consid­ered a spill-over of the theories of Engels (1942), Weber (1930), Veblen (1924), Horney (1945) and Fromm (1947) who have indirectly related accumulation, and, particularly, aggressive accumulation of money to masculinity strivings and have shown how conceptions such as exploitation, "predatory" economic behaviour are relevant to male self concept under competitive capitalism (see also section 4, Chapter 1).

The third hypothesis, on its part, is intimately related to the second. If economic behaviour, by definition, involves inter­personal hostility, jealousy, avarice, etc. (to borrow expressions from Keynes) and consistently invokes aggressive phantasies, one can expect persons disvaluing money at the attitudinal-association level to have conflicts about interpersonal aggression.

**METHOD**

**Operational Definitions**

A measure of the psychological value of money to an individual was developed from the average score made by a S in judging the concept Money on three evaluative scales of the SDS (Chapter 2). The scales used for this purpose were: worthless—valuable, meaning­less—meaningful, and pleasant—unpleasant (see also Osgood, Tannenbaum and Suci, 1957).

To get an impressionistic assessment of the validity of this measure, value-scores obtained by 30 subjects (Ss) were correlated
with their scores on a measure of conflict about money. The latter was derived from the SCTM. A measure of the individual's degree of conflict about money was developed by summing the number of sentences showing (a) acceptance of and positive responses towards money, and/or (b) showing the absence of any negative affect about the rejection of money. To test the reliability of the measures 10 SCTM protocols were given to two judges. Percentage of agreement between the judges, based on individual sentences (N=200) and measured in terms of $r_{tet}$, was .90. The first measure, that is (a), correlated to the extent of .67 ($p=.001$) with the SD measure. As the intention was to measure the value of money in terms of the internalised conflicts about money, the possibility of using the SCTM measure which was a projective-level datum was considered. But it was felt that the semantic measure was more rigorous, being based on three observations (subscales) in each case and having built-in reliability of the original instrument itself.* Moreover such a projective measure had been tried out in the experiment reported in Chapter 5. It was therefore considered judicious and prudent to use it on an exploratory basis first.

Clarity of sexual identification was defined in terms of the degree of sexual differentiation. This operational assumption was based on the empirical works of Machover (1949), Levy (1950), and Swensen (1957). A SD and a DAP measure of sexual differentiation were employed, so as to tap both the associational and

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*Recent attempts to adapt the semantic differential to Indian situation shows the same factor structure of meaning. (Personal communication from Mrs. Rhea S. Das.)
projective levels. The SD measure was the semantic discrepancy between the concepts Man and Woman of five descriptive scales, representing the major factors of meaning extracted by Osgood and his associates. The discrepancy was measured by means of the generalized distance statistic, \( D(Osgood \text{ et al, 1957}) \). The factors involved were evaluative, oriented activity, potency, stability and aggressiveness and were represented by the scales optimistic-pessimistic, active-passive, strong-weak, rash-cautious and defensive-aggressive (Osgood et al, 1957) respectively. The DAP measure was obtained by scoring the DAP protocols according to Swensen's (1957) scale. The "workability" of these two measures in the Indian context have been discussed in greater details in Chapter 2, section 4. They were found, in the present instance, to be correlated with each other to a statistically significant extent.

Measures of self concept also was derived from SD and DAP data. The SD measure was the D between the concepts Me as I am and Me as I like to be, on the descriptive scales listed above. The DAP measure was obtained by scoring the drawings of the Ss according to method of Bodwin and Bruck (1961). See a detailed report in Chapter 2, Section 4.

The working hypothesis not only predicted an association between themes of interpersonal aggression and low valuation of money, but also specified this aggression as ego-alien. Accordingly, projective as well as associational indices of interpersonal aggression were used. The projective measure was derived from incidence of themes of interpersonal hostility in SCTM and was expected to yield deeper-level data. The associational measure
tapped defensive evaluation of social objects on the SD scale, aggressive-defensive. It was expected that conflicts that interpersonal aggression will be revealed by the subjects through recourse to neutral 4 scores on the scale (Osgood et al., 1957).

The internalised image of money was a rather difficult concept to operationalise. Theoretically, it was conceived as a complex multi-level phantasy-element, with sociocultural, experiential and interpersonal coordinates and, hence, could not be operationalised in simplistic terms. Nevertheless, a crude operationalisation was attempted at the semantic-associational level with the help of a SD scale. In this scale, the Ds between the concept Money, on the one hand, and Support, Anger, Power, Dirt, Food and Love, on the other, were considered. These concepts were judged against the descriptive scales worthless-valuable, exciting-claiming, stable-instable and strong-weak. It was assumed that these semantic comparisons would reveal the goal-objects sought through money and, thus, indirectly, the cognitive image and symbolic status of money.

Procedure

Ss were 32 middle class, Gujarati-speaking, and post and under-graduate college students of Ahmedabad who took the various tests and scales individually. Because each S had to be tested and interviewed for over two hours, the sample necessarily had to be a small one and this did not permit the design to control some of the variables it would have liked to control. The range of income of the Ss' fathers (most of the respondents did not have any personal income) was Rs.255 to Rs.511 per month. This gave a mean of Rs.321.4 and a mean deviation of 32.6.
The SD data on each variable were converted into scores in the way by assigning numbers varying from 1 to 7, to scale-positions on each descriptive scale. For thematic analysis of SCTM data, the strength of a theme in a S was not considered; only its presence or absence in a Ss was taken into account.

For analytic purposes, the S were classified as high-valuers and lowvaluers on the basis of a median split of the value-scores obtained from their SD data. The highvaluers and the lowvaluers were then compared on the various measures by means of the median test.

The highvaluers and the lowvaluers were found to have median incomes of Rs.319.4 and Rs.326 per month respectively. The Mann-Whitney U test was employed to test this observed difference in median. It yielded a nonsignificant U of 94. So the variable income could be said to have been partially controlled, even if incidentally.

RESULTS

Adequacy of self concept was not different for the highvaluers and lowvaluers on either of the two measures employed. Results of the comparison between the two groups are shown in Table 35. It can be seen that only the subscale Erasers and Transparency of the Bodwin-Bruck Scale could differentiate the two groups at .05 and .01 levels of significance respectively. However, both the instruments yielded results that were compatible with the hypothesis insofar as the direction of relationship was concerned.

Degree of sexual differentiation could not distinguish the two groups either at a statistically significant level though the trends
Table: 35

Comparison of Highvaluers and Lowvaluers on DAP and SD Measures of Self Concept

<table>
<thead>
<tr>
<th>Measure</th>
<th>Median of Highvaluers</th>
<th>Median of Lowvaluers</th>
<th>Chi-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reinforcement</td>
<td>2.94</td>
<td>2.46</td>
<td>0.14</td>
</tr>
<tr>
<td>Erasers</td>
<td>4.50</td>
<td>2.96</td>
<td>4.82**</td>
</tr>
<tr>
<td>Sketchy and Broken lines</td>
<td>3.28</td>
<td>2.54</td>
<td>0.21</td>
</tr>
<tr>
<td>Transparency</td>
<td>2.11</td>
<td>3.23</td>
<td>3.01*</td>
</tr>
<tr>
<td>Distortion</td>
<td>3.06</td>
<td>3.31</td>
<td>1.67</td>
</tr>
<tr>
<td>Incompleteness</td>
<td>3.17</td>
<td>3.54</td>
<td>1.67</td>
</tr>
<tr>
<td>Opposite sex identification</td>
<td>3.89</td>
<td>3.77</td>
<td>0.14</td>
</tr>
<tr>
<td>Primitiveness</td>
<td>3.78</td>
<td>3.54</td>
<td>0.14</td>
</tr>
<tr>
<td>Immaturity</td>
<td>4.17</td>
<td>3.23</td>
<td>1.67</td>
</tr>
<tr>
<td>Scale score</td>
<td>30.28</td>
<td>27.54</td>
<td>0.21</td>
</tr>
<tr>
<td>SD</td>
<td>4.87</td>
<td>3.33</td>
<td>0.88</td>
</tr>
</tbody>
</table>

* p = .10
**p = .05

once again were in the expected direction. Results obtained from the DAP and semantic data relating to this variable are shown in Table 36. The two groups, however, tended to differ on the semantic measure of sexual differentiation, (p = .10).
Table: 36.

Comparison of Highvaluers and Lowvaluers on DAP
and Semantic Measures of Sexual Differentiation

<table>
<thead>
<tr>
<th>Measure</th>
<th>Median of Highvaluers</th>
<th>Median of Lowvaluers</th>
<th>Chi-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAP</td>
<td>7.11</td>
<td>6.23</td>
<td>0.14</td>
</tr>
<tr>
<td>SD</td>
<td>6.81</td>
<td>4.05</td>
<td>3.47*</td>
</tr>
</tbody>
</table>

*p = .10

The proportion of "conflict-indicating 4 judgements" on the scale defensive-aggressive could, however, easily distinguish between the two groups at .001 level of significance. Table 37 summarises the results. A validation of these validation of these

Table: 37.

Comparison between Highscorers and Lowscorers on Semantic
and Projective Indices of International Aggression.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Highvaluers</th>
<th>N</th>
<th>Lowvaluers</th>
<th>N</th>
<th>Chi-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>SD</td>
<td>3.14</td>
<td>47</td>
<td>5.65</td>
<td>37</td>
<td>13.01**</td>
</tr>
<tr>
<td>SCTM</td>
<td>0.54</td>
<td>8</td>
<td>0.17</td>
<td>3</td>
<td>5.01*</td>
</tr>
</tbody>
</table>

*p = .05
**p = .001

results was obtained from incidence of themes of interpersonal aggression in SCTM. Table 37 also reveals that, consistent with expectations, disvaluers made a greater number of responses associating money with interpersonal aggressiveness (chi square = 5.01, p = .05).
Some ancillary information on this count can be had from Table 38 which summarises the differences between the two groups on the scale aggressive-defensive vis-a-vis the meaning of certain critical concepts.

Table: 38

Comparison of Median of Highvaluers and Lowvaluers on scale aggressive-defensive

<table>
<thead>
<tr>
<th>Concept</th>
<th>Highvaluers</th>
<th>Lowvaluers</th>
<th>$\chi^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Me as I am</td>
<td>3.83</td>
<td>3.31</td>
<td>1.25</td>
</tr>
<tr>
<td>Me as I like to be</td>
<td>4.17</td>
<td>3.23</td>
<td>1.25</td>
</tr>
<tr>
<td>Rich</td>
<td>4.60</td>
<td>4.60</td>
<td>0.14</td>
</tr>
<tr>
<td>Poor</td>
<td>2.61</td>
<td>3.15</td>
<td>1.25</td>
</tr>
</tbody>
</table>

The results of the median test in respect of the semantic image of money in the two groups of Ss are shown in Table 39.

Table: 39

Comparison Between Highvaluers and Lowvaluers on the Ds Between Money and Other Symbols.

<table>
<thead>
<tr>
<th>D</th>
<th>Median of Highvaluers</th>
<th>Median of Lowvaluers</th>
<th>Chi-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>D(Money, Support)</td>
<td>5.50</td>
<td>4.35</td>
<td>3.93*</td>
</tr>
<tr>
<td>D(Money, Anger)</td>
<td>6.77</td>
<td>7.36</td>
<td>0.00</td>
</tr>
<tr>
<td>D(Money, Power)</td>
<td>3.29</td>
<td>3.74</td>
<td>3.44</td>
</tr>
<tr>
<td>D(Money, Dirt)</td>
<td>7.27</td>
<td>5.96</td>
<td>5.42**</td>
</tr>
<tr>
<td>D(Money, Food)</td>
<td>4.15</td>
<td>4.60</td>
<td>2.60</td>
</tr>
<tr>
<td>D(Money, Love)</td>
<td>4.40</td>
<td>5.21</td>
<td>1.67</td>
</tr>
</tbody>
</table>

* $p = .05$
** $p = .01$
They revealed that only 1 out of the 9 chi squares computed was significant at .05 level. The possibility this being the chance is admittedly high (p=.60 - .70). The sole significant statistic suggested that Money and Support were conceptually more similar in the lowvaluers (p=.05). The significant result relating to conceptual similarity between Money and Dirt could be ignored in view of its tautological nature. There was, however, also a trend towards high-valuation of Money being associated with greater similarity between the semantic structure of Money and Power (p=.10).

DISCUSSION

The results can claim as their victims two of the three hypotheses set forth at the beginning of this report. They, however, suggest that the psychological value of money, as defined in this study, is associated with the valuer's conflicts about interpersonal hostility. The SD result relating to this is important, not only because of the high level of statistical significance attained by it (p=.001), but also because the actual number of observations involved in the computation of the statistic was 256. The SCTM results not only supports the SD results, but also suggests a reason for this association discovered. It seems that conflicts about interpersonal hostility associated with low valuation of money is due to the fact that money is a symbol and a mediator of aggression and because aggressive interpersonal imageries surround it.

There is some scrappy evidence to indicate that this aggression was relatively more ego-alien in the lowvaluers. For example,
though the incidence of 4 scores differentiated the two groups so clearly (even for the concepts Rich and Poor, the lowvaluers use the scale position of 4 more frequently), none of the interpersonal concepts used in the semantic differential were judged as more aggressive by the lowvaluers. Even in case of the concepts Rich and Poor, though the lowvaluers tend to use the "central" scale position more frequently (chi square = 2.93, p = .10), these concepts are not judged as more aggressive by them. On the other hand, the lowvaluers judged Me as I am and Me as I like to be as less aggressive than the highvaluers, though results are not statistically significant. This seems to suggest that the lowvaluers are less able to accept their aggressive impulses. Strong support for this interpretation is available from the discrepancy between the projective and semantic associations to money. While in SCAM money was more persistently associated with the theme of interpersonal aggression in the lowvaluers, in the semantic differential the D(Money, Anger) was larger in them. As if, money being focus of aggressive imageries at the projective level, these Ss reject money as a pleasurable, need-gratifying goal. It is possible to hypothesise, on the basis of these results, that high valuation of money is a result of greater ego-acceptance and/or rejection of one's aggressive impulses.

This explanation also provides a clue to the greater conceptual similarity between Money and Support and, to a lesser extent, Money and Power is the lowvaluers. Apparently, Support and Power with their connotations of protection against aggression, are more valued goals in the lowvaluers, living in a world of interpersonal hostility and fear of hostility.
The lack of clear association between the self-concept and sexual differentiation scores, on the one hand, and value of Money, on the other, was not surprising in view of the fact that these personality variables were chosen arbitrarily, on the basis of their observed relationship with certain aspects of the internalised image of money in earlier studies. That is, associations between these variables and Money-value were emphasised on logical rather than empirical grounds. It is however as likely that the lack of clear association was due to the small sample-size and the rule-of-thumb procedures followed. It was interesting to note, however, that the lowvaluers scored low on the self-concept scale as well as on Swensen's scale, even if both these trends were statistically non-significant. This was consistent with the relevant hypothesis. Also it was noticed that highvaluers used erasers less frequently than the lowvaluers (p=.05). If we remember that use of erasers on DAP is one of the indices which has been found by investigators to be an indicator of anxiety, the implications once again seem to become compatible with the hypothesised relationships.

Further work is of course necessary before the above results could truly be relied upon. Without replication on a larger sample, not much confidence can possibly be placed on results obtained through the relatively crude operationalisations employed in the present study. However, the results have quipped the present approach with an interesting working hypothesis on which future attacks on the problem can be broadbased.
On the substantive level, the present experiment indicates clearly that a personological approach to problem of the value of money is possible and that such an approach can supplement the other psychoeconomic positions relating to the same problem. This conclusion is strongly supported by the observed equivalence between the highvaluers and the lowvaluers vis-a-vis objective economic experiences operationalised in terms of income. Though a rigorous replication of this particular result is called for, there is prima facie evidence to suggest that the present experiment has investigated a dimension of the value relatively independent of the valuer's economic status. Corollarily, one is tempted to hypothesise that this dimension of valuation is more intimately related to deeper-level personality variables.

Seen from this vantage, the study can be said to have served its purpose. As it had not nurtured the hope that homo economicus can be successfully substituted by homo psychologicus, the negative results are not damaging to the implicit wide-spectral behavioural model that recommended as a possible alternative to the "pureeconomic and psychoeconomic theories of money-value at the beginning of this experiment. On the contrary, it recognised that the objective reality had a vital role to play in each economic situation. Hence its plea for the extension of the common sense proposition, that human behaviour which, in spite of all attempts of economists to operate on the basis of assumed rationality of human beings, can be shown to have its determinants in intra-individual and inter-personal dynamics.
SUMMARY

An associational measure of an aspect of the psychological value of money was developed from three descriptive scales of a semantic differential, all representing the evaluative factor of meaning. Validity of the measure was checked against a projective measure of conflicts about money obtained from a specially constructed sentence completion test ($r = .67$) and its reliability can be said to be partially built-in.

32 Ss, whose value scores were available, were divided into highvaluers and lowvaluers on the basis of a median-split of these scores. These groups were then compared, by means of the median chi square test, on a number of personality variables measured by special semantic differential, sentence completion and DAP tests.

Results showed that the two groups did not clearly differ on the semantic and DAP measures of self concept and sexual differentiation and on the meaning of money. Better self concept, as measured by two subscales of the DAP measure, and clearer sexual differentiation, as measured by the semantic differential, showed trend towards being associated with high valuation of money ($p = .10$). A semantic measure of conflict about interpersonal hostility could, however, very clearly differentiate the two groups ($p = .001$). The disvaluers were found not only to show greater conflict on this measure, but also mentioned the theme of interpersonal aggression more often in the SCTM ($p = .05$).
It was hypothesised that the psychological value of money is a function of conflicts about interpersonal hostility, within, of course, the limits set by the sociocultural parameters involved.
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