This study was designed to explore the behavioral correlates of locus of control in kibbutz children in Israel. A locus of control questionnaire was given to 183 children aged 9-14 from six kibbutzim. The subjects were assessed by their teachers on various competence variables and participated in a structured decision-making task. It was found that the more internal the locus of control of the subject (especially the more he took responsibility for failure results), the higher he was rated by his teacher in independence and confidence variables. Also, internal locus of control children were significantly more actively involved in the decision task; locus of control was unrelated to the children's own stimulations of their success in academic situations. (Author/DP)
LOCUS OF CONTROL,

ACHIEVEMENT AND DECISION-MAKING ISRAELI KIBBUTZ CHILDREN

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Locus of Control
ABSTRACT

The aim was to explore the behavioral correlates of locus of control in kibbutz children in Israel. A locus of control questionnaire was given to 183 children aged 9-14 from six kibbutzim. The subjects were assessed by their teachers on various aspects of competence, and underwent an empirical decision task.

It was found that the more internal the locus of the subject of the task was, and especially the more he took responsibility for failure results, the higher he was estimated by his teacher on the behavioral indices of confidence and independence (p < .05) and the more actively involved he was in the decision task (p < .01) which was relatively free from prior criteria of success. The children's level of locus of control was here unrelated to estimations of their success in learning achievement.
Rotter (1954, 1966), in his social-learning theory, assumed that the degree to which a person attributes the reward he receives in a certain situation to his own activity is essential to his learning. He argued for individual differences in the degree to which people assume an ability to control results, and claimed that this factor should influence their behavior in a wide variety of situations where they have to solve problems through previously acquired skills.

It has been found that a person who perceived results related to his own activities showed more interest and concrete involvement in situations (Lifshitz, 1971); and that he attempted to solve problems more actively than a person who believed that he was controlled by external factors (Crowne and Liverant, 1963; Hersch & Scheibe, 1967). The score on a questionnaire designed to measure a person's locus of control differentiated between children who performed well in school and those who did not (Crandall, Katkovsky & Crandall, 1965; McGhee & Crandall, 1968); the concept of locus of control (LC) was explained as developing out of a prior learning within a social context based on reinforcements given to specific successes in school achievement. LC was thus connected to concrete
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points of successful interactions with the environment. On the other hand, Lifshitz (1971) found evidence to support the contention that internal LC had more to do with freedom or flexibility to explore new avenues of action. Subjects with more external LC pursued inflexibly their prescribed line of action and adhered more closely than those with the more internal locus to the initially stated criteria of success.

The present study aimed at exploring further the correlates of the personality variable of LC on the behavioral dimension of rigidity-flexibility in dealing with environmental demands. The question was: Is LC related to a person's persistence in holding to an already reinforced external cue and to his reluctance or inability to venture to positions where the external success cues are as yet not clearly known, or vice versa? The answer could perhaps be explored in situations which give opportunities for both rigid and flexible manifestations of behavior. Thus it was decided to assess the situation among: (a) children approaching a change by the imminence of maturity; (b) children continually exposed in their everyday life to diverse educational approaches, ranging from the teacher's authoritative approach (with very defined personal criteria) to self-responsibility of the children in learning.

Kibbutz education is well known (Darin-Drabkin, 1962; Lifshitz, 1972) for its relative lack of emphasis on external cues of success (examinations, grades, etc.) and in its emphasis on encouraging children to look for their own cues and internal
rewards. On this basis an hypothesis was formulated that the LC of kibbutz children would reveal higher indices of independent explorative behavior than achievement along prescribed lines (as usually is the case in school achievement).

METHOD

Sample. One hundred and eighty-three kibbutz children aged 9-14, from the 4th to 8th grades (105 boys and 78 girls), took part in this study. They belonged to six kibbutzim randomly chosen from the three main kibbutz movements, two kibbutzim from each movement, two classes in each kibbutz.

The assignments were performed simultaneously in all six kibbutzim. The experimenters were six kibbutz members, women students in special education from the Kibbutz Teachers' College, who administered the tasks in their own kibbutzim. The meaning of the questionnaire and the tasks were explained to them only at the end of the study. They were simply instructed in technical matters, and later in scoring procedures.

Instruments. LC was assessed by the Intellectual Achievement Responsibility questionnaire (IAR), which was composed for use with children by Crandall, Katkovsky and Crandall (1965). The subjects filled out the questionnaire individually while seated in a group in their classroom. The questions aimed at examining the degree to which a child views results as dependent on himself or attributes them to the wishes of others, to luck, etc. The content of the questions was restricted to the child's immediate experiences, and the sources of external control were people
having direct contact with the child, i.e. parents, teachers and friends. The questionnaire included sentences referring to failures and weaknesses, and an equal number of sentences referring to success situations. The score of I- was given when the child assumed responsibility for failures (e.g. lack of talent, lack of grasp of material, etc.). The score of I+ represented responsibility for successes (e.g. a good grade based on personal efforts). The scores were graded separately for those sentences assessing responsibility for success (I+ score), responsibility for failures (I- score), and a combined score I (Internal) which was the sum total of I- and I+ scores.

After a period of about four weeks each child was individually faced with a choosing task. The subject had to choose between two supposedly identical stimuli each time, on the basis of differentiation of shapes, lines, colors, etc. The stimuli were two closed boxes of colored crayons, identical boxes in a pair but a different pair in each presentation. The experiment included two parts:

(a) In the first situation the experimenter represented the source of reinforcement in telling the child that he already had the right answer. He read the following instructions, while placing twin boxes of colored crayons in front of the subject and opening and shutting them briefly, to familiarize the child with the objects: "You see two identical boxes. One is the right box, the other is the wrong one. I decided which of the
two is the right one. Take your time. Decide which is the right one." The examiner allowed a maximum of 180 seconds to answer and checked the time from the second he finished giving the instructions to the second the child answered.

(b) The second situation. Here the subject had to find his own cues of success as he had been told that the experimenter had not previously set any criteria for success. The instructions this time were as follows: "Now you see two different boxes. (Again, the boxes were briefly opened and closed). There is no right or wrong. Take your time. Choose the box which seems to you the better one." The maximum response time was again 180 seconds. In each case, if the subject asked questions, the above instructions were repeated. In each test the following measures were recorded: (a) the length of time taken by each child to reach a decision; (b) whether the child remained passive or actively manipulated the boxes; and (c) his arguments for picking one box rather than the other, i.e. whether it was an arbitrary and undefined decision, or a well-supported and articulated one.

Except for the separate measure of time, activity and argument, it was decided to have a composite score which included the three measures in the form of a ratio between time and quality of decision; quality included manner of activity and argument. The general score was divided into six categories, as follows:
<table>
<thead>
<tr>
<th>Category</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST/PQ</td>
<td>1</td>
</tr>
<tr>
<td>LT/PQ</td>
<td>2</td>
</tr>
<tr>
<td>ST/GQ</td>
<td>3</td>
</tr>
<tr>
<td>LT/argument (alone)</td>
<td>4</td>
</tr>
<tr>
<td>LT/active (alone)</td>
<td>5</td>
</tr>
<tr>
<td>LT/GQ</td>
<td>6</td>
</tr>
</tbody>
</table>

ST - Short Time, under 20 seconds
LT - Long Time, over 20 seconds (20 seconds constituted the median score of decision time)
PQ - Poor Quality, passive and no argument
GQ - Good Quality, active and argumentative

In order to check the child's actual coping behavior in his day-to-day reality, his teacher and peers were later asked to assess him on several variables. Each class-teacher was asked to indicate on a prepared page his impressions of the child's (a) self-confidence and independence, and (b) learning ability. The teacher's assessment was given twice for each variable: first, on a 7-point rating scale - from excellent to poor - for each child; secondly, by ranking the entire class on each variable - from the best to the poorest. To achieve a uniformity of scores among unevenly numbered classes, each ranking was later divided into three equal parts and thus a child was placed relative to his peers, as being high (value of 3), average (value of 2), or low (value of 1). The ranking and rating allowed a reliability check to be made of the assessments.
RESULTS

Analyses of variance of each decision score in the two conditions were carried out in order to detect possible factors of age, sex and kibbutz movement, but did not produce significant results. The only exception was the score for argumentation in the second test, in which girls scored notably higher than boys ($F = 4.6$, $df = 1/70$, $p < .05$). On the basis of these results it could be concluded that sex, age and specific environmental approach did not appear to be factors accounting for the scores of the first decision task, and thus could not affect the relationships between the decision and LC scores.

The children's three different scores on the IAR questionnaire ($I_+^*, I_0^\text{m}, I_{total}$), were then correlated with the behavioral factors which included: (a) the teacher's ranking and rating of each child's learning ability, and his independence and self-confidence; (b) the children's scores on the two parts of the decision task: response time, manner of action, arguments and the composite score.

Insert Tables 1 and 2 about here

The results which appear in Table 1 indicate that -- out of all teachers' estimations of the subject's learning ability and competence -- the only significant correlation ($p < .05$) existed between the child's tendency to assume responsibility for failures and the teacher's ranking of the child's independence and self-confidence relative to his classmates.
As can be seen in Table 2, the child's tendency to take credit for results was more often significantly related to scores based on his actual coping with the decision situation. This was especially the case for the first part of the decision situation, which was more externally controlled than the second part. The running decision time and the manner of action by themselves were not found to be related to the child's tendency to assume responsibility. Responsibility for failures (I-) and general responsibility (I total) correlated significantly (p < .01) with the general decision score and argument score in the situation where the subject was to assume that there was a "right" answer. The more a child assumed responsibility for successes (I+), the better he coped with the second part of the decision task, a situation in which he was more led to believe that there were no previously fixed authoritative criteria for judging his behavior (p < .05).

DISCUSSION

One of the most interesting findings of the present study is that the ability to assume responsibility for failures (I- score) was significantly related to the individual's success in fulfilling an ambiguous task in a situation which was more authoritatively controlled (p < .01). In a different study (Lifshitz 1972a), the ability of a group to organize itself around a task was found to be related to the group's average level of responsibility for successes (I+), but not
to responsibility for failures. What could account for these two findings is the general ideology and educational approach of the kibbutz. The findings give support to the notion that the educational emphasis in the kibbutz is more on the success of the group, gained by mutual cooperation, trust and decision, than on the individual child. The child as an individual probably attempts more to avoid failures, attributing successes to the efforts of the entire peer group and the adults who set some form of a desired criteria (Lifshitz 1973a). The first part of the decision task was a situation which probably came close to the child's actual reality, even within the kibbutz educational approach. In the second part, where responsibility for setting new criteria was assigned more to the child, the amount of responsibility he was able to take for successes (I+) became significant (p < .05), i.e. when the subject was to determine his own guide lines, his capacity to cope was more related to his inclination to take responsibility for successes than for failures.

The lack of relationship between the LC scores and the time factor could suggest that as both boxes were identical and no other cues were given, many subjects regarded both situations as chance tasks (Rotter & Mulry, 1965). The weaker relationships found for the second task represent perhaps a growing feeling of helplessness in this sort of a situation where no criteria at all seem to be available. Other factors which focus on the utilization of time in performing a task should be
more closely examined. The significant correlation (p < .01) between the quality of the subject's arguments and his inclination to take responsibility for results (I−, I total) could be based on Lefcourt's assumption (1967) that the more external individual lacks in recognizing new cues that might guide toward andness experiences, and thus is less able to verbalize what he could not initially perceive. It also supports Phares' (1968) finding that students with a greater internal LC gave more reasons for their decisions, in a computer-simulation task, than those whose LC was more external.

No significant correlation was found between LC and learning achievement based on the teacher's and peers' evaluations. This contradicts findings by Crandall et al. (1965) and McGhee and Crandall (1968). Although the latter used achievement tasks as their criterion, it seems that a general appraisal would give more valid and reliable information in the setting of the kibbutz where each individual is closely known. The finding suggests that the factor of success in learning which McGhee and Crandall (1968) assumed to influence the development of LC in children was not an important contributing factor in the development of the LC of Israeli children studied here. In the kibbutz sample in particular, attitudes of self-responsibility and responsibility for success of the group as well as some venturesome attitude toward learning experiences, are probably more reinforced than individual achievement based on predetermined criteria.
The present study seems to support the contention that the variable of IC has to do with factors that are reinforced within a specific cultural-educational setting. In a culture which emphasizes self-responsibility (for person and group), the more the person internalized this attitude, the better he would be able to cope with decision situations which are relatively free from prior known criteria of success. Whether in education, self and group responsibility or achievement per se should be more emphasized, is a matter of value judgment. In the writer's opinion, attitudes which motivate a person to exercise relative freedom from previous external guidelines, seem to help furnish him with an important personal attribute in a world which necessitates fast adaptations to changes or puts pressures on individuals to introduce changes by active participation.

Perhaps more attention should be given to conditions (e.g. educational approaches) which enhance or impede the development of a more internal IC.
FOOTNOTES

1 The study reported here was made possible by a grant from the Institute of Research on Kibbutz Education and by the cooperation of the children and teachers who participated. The author wishes to express her gratitude to Dr. Menachem Gerson and Michael Natan for their instructive comments, and to the following who took part in various aspects of data gathering and/or analysis: Rachel Avidor, Pnina Amir, Sarina Barkai, Sarah Hubert, Shoshana Kastan, Dorka Sternberg and Yehuda Asphormas.

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2 The study was later replicated with an older group (ages 14-15) of 62 Israeli city children. The order of the decision task was alternated from subject to subject to cancel out possible effects of order presentation. Subjects' LC scores were not significantly correlated with any of the teachers' estimations of their learning ability and self-confidence, though the tasks were given at the end of the academic year. On the other hand, the more credit the children took for their successes (I+), the more active they were ($r = .31, p < .05$) and the more arguments they gave ($r = .25, p < .05$) for that decision task where the examiner heavily stressed having what was considered to be the "key to success". For the kibbutz children, aged 9-14, relationships in this situation were found with the ability to take responsibility for failures (I-). The difference could be explained as associated with the diverse educational emphasis, cooperative emphasis in the kibbutz at the younger
school-age group vs the more individualistic and competitive striving for success of an older child raised within the city (Raven & Leff, 1965; Shapira & Madsen, 1969).
TABLE I

Correlations between observers' assessments of a child's behavior and his responsibility scores (n = 183)

<table>
<thead>
<tr>
<th>Teacher's Assessment</th>
<th>Learning ability</th>
<th>Self Confidence and Independence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ranking</td>
<td>Rating</td>
</tr>
<tr>
<td>I+</td>
<td>0.04</td>
<td>0.04</td>
</tr>
<tr>
<td>I-</td>
<td>0.09</td>
<td>0.08</td>
</tr>
<tr>
<td>I Total</td>
<td>0.07</td>
<td>0.07</td>
</tr>
</tbody>
</table>

* p < .05
Correlations between a child's responsibility scores and his actual behavior in decision situations (n = 183)

<table>
<thead>
<tr>
<th></th>
<th>1st Task</th>
<th></th>
<th>2nd Task</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>Manner</td>
<td>Argument</td>
<td>General</td>
<td>Manner</td>
</tr>
<tr>
<td></td>
<td>of Action</td>
<td></td>
<td>Judgement</td>
<td>of Action</td>
</tr>
<tr>
<td>I+I</td>
<td>0.06</td>
<td>0.13</td>
<td>0.18*</td>
<td>0.01</td>
</tr>
<tr>
<td>I-</td>
<td>0.01</td>
<td>0.14</td>
<td>0.29**</td>
<td>0.04</td>
</tr>
<tr>
<td>I</td>
<td></td>
<td>0.16</td>
<td>0.26**</td>
<td>0.03</td>
</tr>
<tr>
<td>Total</td>
<td>0.03</td>
<td>0.16</td>
<td>0.26**</td>
<td>0.03</td>
</tr>
</tbody>
</table>

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


