

SOCIAL AND PSYCHOLOGICAL VARIABLES
IN LEARNING HEBREW

by

Moshe Anisfeld

A thesis submitted to the Faculty
of Graduate Studies and Research in
partial fulfilment of the requirements
for the degree of Master of Arts.

Department of Psychology,
McGill University,
Montreal.

August 1960

ACKNOWLEDGMENTS

The writer is grateful to the principals and teachers of the Jewish parochial schools in Montreal for their assistance and cooperation during the testing programs in their schools. Thanks are also expressed to S. Cytrynbaum for his assistance in the administration and scoring of the tests and in the calculations of the item-analysis reported in this thesis. Special thanks are due to Dr. D. Solomon (McGill) and to Dr. L. Rosenberg, research director of the Canadian Jewish Congress, for their critical readings of the sections relating to the characterization of the various Jewish communities in Montreal. The writer is also indebted to Dr. G.A. Ferguson (McGill) for his advice on statistical analysis.

CONTENTS

	Page
INTRODUCTION	1
Intelligence and Linguistic Skill	1
The Role of Attitudes in Second-Language Learning	3
HYPOTHESES	11
METHOD	13
Materials	13
Subjects	16
RESULTS AND DISCUSSION	20
Ability and Achievement	20
Attitudes and Achievement	23
Language Aptitude and Anti-Semitism	32
SUMMARY	33
APPENDIX A -- CORRELATION MATRICES	34
APPENDIX B -- ATTITUDE QUESTIONNAIRES	42
APPENDIX C -- IDENTIFICATION SCALE -- ITEM-ANALYSIS	47
REFERENCES	49

SOCIAL AND PSYCHOLOGICAL VARIABLES IN LEARNING HEBREW

INTRODUCTION

In the psychological literature dealing with second-language learning, both intellectual and attitudinal-motivational variables have repeatedly shown up as important prerequisites of second-language achievement. In the following paragraphs both of these groups of variables will be evaluated and their roles in the process of acquiring a new language examined.

Intelligence and Linguistic Skill

The attention of investigators interested in the selection of students who would benefit most from language instruction was naturally drawn to intelligence tests. If intelligence tests are measures of the capacity to learn, they should also predict the capacity to learn language skills. A summary of the studies dealing with the predictive value of general intelligence, in 1929 (Hermon, 1929), showed that "the correlation between intelligence test scores and success in modern foreign languages, whether estimated by teacher's marks or objective tests, lies somewhere between .20 and .60, falling more often between .30 and .40." A more recent review (Monroe, 1950) reports that the median correlation of intelligence with marks in foreign languages is .33 and with objective achievement tests .46. There seems to be a differential dependence of the various aspects of language skill on intelligence. Intelligence correlates higher with reading facility

and aural comprehension than it does with oral production¹ (Dunkel, 1948). It is becoming clear that intelligence is certainly not the only variable even for determining the more cognitive aspects of language learning. Other specialized talents, not measured by intelligence tests, seem to be of importance, and it appears that oral skills in particular may involve more of these than the cognitive skills. For example, Huse (1945) advances the notion that motor facility rather than intellectual skills determines phonetic proficiency.

In an attempt to measure a specific linguistic ability or abilities, several foreign-language aptitude tests have been constructed. The early aptitude tests were quite effective in predicting success in language learning under academic conditions which emphasized skill in written language. These special prognostic tests were of an intellectual nature and did not add much to intelligence tests in predicting linguistic achievement (Carroll, 1960).

Very likely the most comprehensive language aptitude test to date is the Psi-Lambda Foreign Language Aptitude Battery constructed by Carroll and Sapon (1956). This test purports to be a general one, not biased towards any particular language. Thus Carroll (1960) states "that the data support the hypothesis of the non-specificity of language aptitude. ... That is to say we have recorded high (as well as low)

¹ Since the main objective of foreign-language study in the schools during the 1920's and 1930's was to teach the student to read and to understand what he was reading, the school marks of that period are representative mainly of achievement in reading, and therefore the correlations between intelligence and these ratings should be regarded as correlations primarily between these two variables.

validity for many different kinds of languages" (p.22). The Psi-Lambda battery or its subtests usually yield correlations ranging from the .30's to the .50's for high school students, and up to the .70's for adults under intensive foreign-language training in the U.S. Army and Foreign Service (Garroll, 1956a, 1956b, 1960; Gardner, 1960). It may be suggested that the explanation of the difference in the magnitude of correlations between the two training situations lies in the greater role that variables other than language aptitude, such as motivation and interest, are allowed to play in high school as compared to the intensive course setting.

The correlations of linguistic aptitude and intelligence with achievement are high enough to indicate that ability is an important factor in second-language progress, but it is equally evident that variables other than linguistic aptitude and intelligence are involved. This suggestion is supported by the considerable situation-to-situation variability shown by correlations of intelligence and linguistic ability with achievement measures.

The Role of Attitudes in Second-Language Learning

There is general agreement in the disciplines of anthropology, linguistics and psychology that a language is more than an instrument of communication. It is also a bearer of a culture; it embodies a community's general mode of thought, its code of behaviour and its emotional attitude to things (see, for example, Greenberg, 1957; Whatmough, 1956, p. 168). This view of language has recently been expressed in more analytic-psychological concepts. In commenting on the "semantic

differential," which requires Ss to rate concepts on various scales, Carroll (1959) makes the point that the individual's responses represent fundamental dimensions in his adjustment to the objects in his environment. The three main dimensions, evaluation, potency and activity, which have been found experimentally to be "pervasive components of adjectival characterization," measure the individual's perception of stimuli: (a) as positively or negatively reinforcing, (b) as requiring much or little effort for adjustment to them, and (c) as posing or not posing a necessity of making movements to adjust to them. These perceptual components are responses of a speech community to its environment and are acquired by its members through the learning process.

It seems reasonable to conclude that using a language involves participation in a culture, adhering to specific patterns of behaviour. Christophersen (1948) has made this point emphatically when he said that a bilingual belongs ipso facto to two different communities and possesses two personalities, which may be split and in conflict when there is conflict between the language communities. Christophersen maintains that the variation in a bilingual's efficiency in either one of his languages, at different points of his life, may be partly due to changes in his attitude to the respective language community.

Ervin (1955) has found that French-American bilinguals tell quite different stories about the same TAT pictures when responding in French and in English. The thematic differences are in accordance with the predictions made from a consideration of the value differences in the two cultures. The conclusion seems to be warranted that when an individual

speaks a language, he assumes the roles and standards of conduct associated with the respective language community.

The cultural component of a language has not yet been identified and clarified to a satisfactory extent, but advances have been made since Sapir's statement (1933) that the cultural significance of a language does not lie in its structure but on a more "submerged level." A major contribution in this area has been made by Lambert. In an experiment on the "developmental aspects of second-language acquisition," Lambert (1956a, 1956b, 1956c) has isolated two clusters of linguistic behaviour, a "vocabulary" cluster and a "cultural" cluster. The first is defined by tests measuring vocabulary skills such as commonness or rarity of vocabulary, size of vocabulary and word fluency. The "cultural" cluster is identified by a grouping of tests which measure acquaintance with the more subtle aspects of the other language community, such as habitual word-order, associational form and pronunciation style. By comparing three groups of Ss (American undergraduates majoring in French, American graduate students at an advanced level of specialization of French, and native Frenchmen living in the States), Lambert found that the "vocabulary" cluster differentiates the undergraduates from the graduates and French natives, whereas the "cultural" cluster differentiates the French Ss from both American groups. This finding indicates that the vocabulary tasks are acquired through formal study and experience, but that this form of preparation is not sufficient for mastery of the cultural aspects of a language. To overcome the cultural barrier, "one must assimilate those aspects of a different culture which influence language behavior," or achieve verbal acculturation, as this process has

sometimes been called.

Since the cultural component is so important in the acquisition and mastery of a foreign language, it would follow that the attitude of the learner of a foreign language towards the people and culture of a language community affects his progress in that language.

Ervin (1954) has postulated that identification with the speakers of a language community is the important factor for the acquisition of the quality of linguistic responses characteristic of the native speakers. "Identification may not only facilitate certain kinds of phonological learning, but may facilitate appropriate application of many lexical items; in particular it would lead to more apt use in life situations, with the emotional connotations peculiar to the acquired culture."

In what follows we will review some observational and empirical data to support the notion that the attitude of the learner of a second language vis-a-vis the group habitually speaking this language is important in language achievement.

Whyte and Holmberg (1956) observed individual differences among North-Americans working in Latin America in acquiring Spanish and found that those workers who believed that they shared physical attributes with the Latin-Americans and who showed a "willingness and even a desire to meet with them on a plane of social equality" learned the language and became more fluent than workers who couldn't or wouldn't make this identification. Nida (1957-58) reports the case of an American missionary (exemplary of many similar cases) who could not satisfactorily learn the language of the African country where he was sent, despite the fact that

"most obvious factors seemed so favorable." Nida feels that the failure of the missionary to learn the foreign language was due to his resentment of his foreign background which he strongly desired to escape, and his desire to become completely integrated into the prestige-possessing English-speaking American community. The missionary's native language acted as a symbol of his foreign background and served to produce an emotional resistance against the learning of any foreign language. On the basis of her experience in teaching French in the Province of Quebec, Vachon-Spilka (1959) feels that the main reason for the poor progress of many English-Canadians in learning French is their low regard for the French-Canadian population which makes them feel "a real aversion even for the sound of French."

The first attempt to experimentally study the importance of attitudes toward the other group in the acquisition of their language has been made by Gardner and Lambert who investigated the factors that determine achievement in French by English-speaking high school students in Montreal. In one study (Gardner and Lambert, 1959) they found that two orthogonal factors are related to achievement ratings in French: a linguistic aptitude factor and a social-motivational factor. The social-motivational factor is substantially loaded with the following variables: (a) "integrative" orientation towards the study of French (i.e., a desire to understand the French-Canadians and their way of life or to meet more and different people" as opposed to "instrumental" orientation (a prime consideration of the usefulness of the language in getting a job or becoming a better educated person); (b) intensity of motivation; and (c) favorableness of attitudes towards the French-Canadian people. In a

subsequent study, Gardner (1960) reports similar results. It is important to note that in both studies French-Canadian attitude scales do not correlate directly with achievement. The relation between these two variables in the first study was only through factor loadings.

Before more research is undertaken on the role of attitudes in second-language learning, it seems appropriate to state our current conceptions of the nature of social attitudes.² A language is a means of communication and is perceived as such by human beings.³ An individual's desire to communicate with others varies as a function of two variables: (a) the perceived similarity of the attitudes of the communicator and the communicatees, and (b) the experienced attraction or repulsion of the communicator for the communicatees. The more people are perceived as similar to the communicator and liked by him, the stronger will be his motivation to communicate with them. The motivation to communicate with certain people will express itself as a desire to acquire a means of communication, a language, permitting co-communication. This gives the attitudinal factor an energizing function for the study of the language of other people who are desired as communicatees. This

²This discussion is to a great extent based on Newcomb's theory of social motivation (1953). However, since we have freely used, or abused, his ideas we cannot be specific about references to him.

³We have some empirical evidence to support this statement. In a subsidiary part of our study (which will not be reported in this thesis), Ss were asked to rank four aspects of Hebrew: reading, writing, speaking, and listening, in order of importance to them. "Speaking" was always mentioned as one of the two most important aspects, and most often as the first in order of importance.

desire, according to our proposition, is dependent on perceiving them as equal and experiencing an attraction towards them.

Group attitudes also provide with reinforcing properties for a language, either positive or negative depending on the direction of the attitudes. A language is associated with the people that speak it; it is a symbol representative of them and can elicit attitudinal responses characteristically made to the group. For instance, Lambert, Hodgson, Gardner and Fillenbaum (1960) found that tape-recorded voices of speakers in French with a French-Canadian accent were downgraded on personality characteristics by both English-Canadian and French-Canadian students, whereas this negative attitude was not exhibited towards the same individuals speaking in English. The results of this study seem to warrant the statement that a "spoken language is an identifying feature of members of a national or cultural group and any listener's attitude towards members of a particular group ... generalize to the language they use" (Lambert et. al., 1960, p.44). Thus, if the attitudes toward the language group are positive, similar attitudes will hold for their language, and contact with the language itself will be reinforcing. The learner of a foreign language who has developed favorable attitudes toward that particular language group will not need much in the way of extrinsic reward for the acquisition of these language habits; the language symbols, structures, sounds and meanings become intrinsically rewarding for him. A high school student possessing such attitudes will learn the language not only in school where special rewards and punishments are supplied, but will acquire linguistic habits in other occasions as well. On the other hand, negative attitudes toward a

language group will make contact with their language negatively reinforcing and inhibit its acquisition.

Another aspect of the influence of attitudes on language learning comes through a consideration of the interference that occurs whenever languages are in contact (Weinreich, 1953). Among the extra-linguistic factors that play a role in interference between two languages, Weinreich emphasizes the prestige one endows to a language. The greater the emotional involvement one has with a language the purer he will keep it. The purity or impurity of a language will be evident especially in the domains of phonetics, semantics, syntax, and in what Lambert has referred to as the "cultural" cluster. This consideration implies a distinction between two aspects of language achievement: facility and purity.

"Facility" refers to mastery of the formal aspects of a language. In acquiring facility in a language ability is the most important factor, and attitudes play an indirect role by increasing the motivation and thereby providing a long-term drive as well as reinforcement for the complex and difficult task of learning a new language. "Purity" refers to lack of interference from the learner's native language, or from any other language he happens to know. The purity of one's language is in many cases a perfection coming at the later stages of language achievement, and individual differences in purity would be directly related to variations in the attitudinal factor.

To summarize, language learning, as any other type of learning, requires that the student: (a) possess an ability to acquire relevant habits or sets of habits, (b) be motivated to learn, and (c) receive reinforcement for progress. In the preceding paragraphs we have discussed

intelligence and linguistic aptitude which provide the ability component for the learning process. Then we looked into the relation between language and culture and attempted to show that attitude towards the language community whose language one is trying to acquire is an important factor in achievement. We treated attitude as a motivational construct contributing to the provision of the last two components of the learning situation, namely motivation and reinforcement. Finally we speculated about the role that attitudes play in promoting or preventing interference phenomena.

HYPOTHESES

Hebrew is clearly recognized as the language of Jewish people and this association of language with cultural group is comparatively strong when compared with the French and English languages which are used by many cultural groups. We therefore hypothesized that the relation between attitudes toward the other-language group and language achievement, found to hold for other languages, will be particularly prominent in the case of Jewish children learning Hebrew, which is, in a sense, a case of people learning their own language as a second language. We predicted that a favorable attitude of Jewish children towards belonging to the Jewish community will facilitate their acquisition of Hebrew. On the other hand, an attitude of marginality vis-a-vis the Jewish group will interfere with achievement in Hebrew. In line with the two proposed components of attitude mentioned earlier (similarity and attraction-repulsion), we hypothesized that identification with the Jewish nation and affective sentiments towards it would facilitate the acquisition of

Hebrew. Identification was operationally defined as agreement with opinions made by exemplary Jews about the Jewish group and culture. A student's answers on an identification scale will indicate the extent to which he regards himself as being similar to exemplary Jews. We also measured the degree of a student's satisfaction with his status as a member of the Jewish group by having him state his reactions to statements that express feelings of Jewish anti-Semitism. Our theoretical framework is influenced by the notion of minority group self-hatred developed by Kurt Lewin (1948, p.145ff) and others (Adelson, 1953; Bogo, 1960; Lambert, Hodgson, Gardner and Fillenbaum, 1960; Sarnoff, 1951). These studies document the phenomenon of a tendency on the part of minority group members to adopt stereotyped values assigned to them by the majority.

We will attempt to test, in the case of Hebrew, Gardner and Lambert's finding that "integratively" oriented students do better than "instrumentally" oriented students in learning a second language.

We will also be able to test the supposed generality of the Psi-Lambda Foreign Language Aptitude Battery, in the case of Hebrew. Carroll (1960) mentions the use of this test with adults for predicting success in intensive courses of Hebrew with results similar to those found for other languages in similar training situations.

METHOD

Materials

Scores on the following tests were obtained:

Achievement Measures

1. Teachers' ratings. The Hebrew instructor of each class was asked to assign to his students the usual school marks for achievement in Hebrew with as much distribution as possible. In some cases, teachers were approached a second time and asked to rank those students who were given the same mark. Since most teachers tended to stress reading ability and understanding of written language, we asked them to pay special attention to their students' ability to speak and comprehend spoken Hebrew when assigning ratings. In one class (Class A) which was at a sufficiently advanced level to enable the teacher to make a distinction between her students' comprehension of Hebrew and their oral skills in the language, she was asked to rate them separately on these two aspects of performance.

2-4. Voice recordings. For two schools we obtained a two-minute tape recording of the subjects' reading of a difficult Hebrew passage. These recordings were evaluated by two Hebrew experts on each of the following three aspects: 2. Reading Fluency; 3. Pronunciation Accuracy; 4. Purity of Accent.

The score on each skill was taken as the combined ratings of both judges. The interjudge agreement was 86 per cent for one school and 88 per cent for the other.

Ability Measures

5. Verbal Reasoning Test. This test, taken from the Differential Aptitude Tests (Bennett, Seashore, & Wesmen, 1959), was used as a measure of intelligence. Because of time limitations we cut the time allowance for this test from 30 to 15 minutes.

6. I.Q. Estimates of I.Q. were available for one class (Class A) only. These estimates were based on the Otis Self-Administering Tests of Mental Ability which had been administered by the Jewish Vocational Guidance Centre in 1958.

7. Psi-Lambda Foreign Language Aptitude Battery, Short Form (Carroll & Sapon, 1956). The tests used were: Spelling Clues, Words in Sentences (shortened from 15 to 10 minutes), and Paired Associates.

Attitude Scales

In this section attitude tests used will be identified and their properties examined. For complete versions of these tests see Appendix B.

8. Identification scale. Eight positively and eight negatively worded statements about Jews and Judaism were randomly presented in a written questionnaire and Ss were required to indicate their agreement or disagreement on a five-point scale, ranging from "I strongly agree" to "I strongly disagree."

Fifteen items were chosen from Geismar's Ethnic Identification Scale" (1954) and slightly reworded when it seemed appropriate to do so. Item 4 was adapted from the California A-S scale (Adorno, Frenkel-Brunswik,

Levinson, & Sanford, 1950).

The items of this scale were analysed using the data of 100 Ss. For item-analysis we employed a simple procedure developed by Professor Ferguson of McGill University (1959). Essentially, this technique yields Pearson product-moment correlations for each item with the total scale. Since nine items correlated above .40 with the total scale and only two items below .30 we did not regard it necessary to exclude any item. It should be emphasized, however, that this scale cannot be regarded as having strong discriminatory power; none of the items, for instance, met the arbitrary criteria for selection of a correlation of .50 with the total score and a variance of .90, set by Jones and Lambert (1959) who first used this method. (For detailed results of the item-analysis see Appendix C.)

It seems that the contents of the items can be meaningfully classified into three content categories: (a) taking pride or shame in belonging to the Jewish group and in its culture (items 3, 7, 8, 9, 11, 14, 16); (b) the extent of obligations and responsibilities following from Jewish group membership, each statement implying a positive attitude towards these obligations (items 2, 4, 12, 13); (c) experiencing membership in the Jewish community as an inconvenience and burden (items 3, 5, 6, 10, 15).

9. Anti-Semitism scale (A-S scale). This scale is composed of seven items, of which six were selected from the California A-S Scale (Adorne, Frenkel-Brunswik, Levinson, & Sanford, 1950) on the basis of their fitness for Jewish Ss. Minor changes in the wording of some items were made, when it was felt necessary. We employed this scale as a

measure of Jewish self-hatred.

10. Orientation index. On the basis of preliminary discussions with Jewish educators and analysis of compositions written by Jewish pupils in Montreal on topics related to study of Hebrew and other languages, we composed 14 possible reasons for learning Hebrew. Nine judges were asked to classify these statements as either "integrative" or "instrumental" according to the definitions of Gardner and Lambert (1959) discussed above. Six items received high agreement of categorization among judges: all judges agreed to classify item 4 as "integrative," and eight agreed on this classification for items 2 and 5; all judges classified items 3 and 6 as "instrumental," and seven did so for item 1. These three "integrative" and three "instrumental" items were finally used to make up the Orientation index.

For each of these statements the S was requested to state, along a three-point scale, the degree of importance the particular reason had for him.

We scored the "integrative" and "instrumental" items separately, and then subtracted the "instrumental" score from the "integrative" to obtain an index of the balance between the two orientations for each individual. Thus the Orientation index measures how much more (or less) intense the student's "integrative" motive is than his "instrumental" motive for studying Hebrew.

Subjects

We contacted 11 grade eight and nine classes in seven Jewish parochial schools in Montreal including in all 148 students. All students except those of one class attended Sunday and late afternoon classes.

We were able to collect complete information on 125 of these, although not all 125 were used in the analysis to follow. The schools as well as the classes so obviously differed in level of training, experience required and regularity of attendance, in addition to having different instructors, that it was appropriate to treat each class as a separate sample (Guilford, 1955, pp.352-354). With this analytic procedure in mind, five students from a reform congregation school were excluded from the final sample after the first meeting with them when it became apparent that their training was not at all related to that of other students and that as a group they were too few to treat as a separate sample. In addition, we excluded 12 students who stopped attending schools between our first and second testings, because their files lacked important relevant information. Six other students did not indicate their names or gave false names, making it impossible to compare questionnaires secured on separate testings. Ten students, although placed in grade eight in the Jewish schools, were excluded from our study because they were only in grade seven in Protestant public schools. The results of three classes in which we obtained data for six students or less will not be discussed because samples were too small to permit meaningful analysis. We will, therefore, limit our discussion to eight classes from four schools, ranging in size from 11 to 17 pupils. These classes are described below.

Class A (N=17) is a grade nine class in an all-day Hebrew school. All children have attended the elementary branch of this school, so that when tested they were in their ninth year of experience in Hebrew studies. The children study the Hebrew language for five hours weekly in addition

to their contact with the language in other Jewish subjects, such as Bible and Talmud study, and reading of prayers.

Class B (N=11) is a grade eight class in another school. All students except for one have already gone through the all-day elementary branch of the school, and they now attend only Sunday and afternoon classes. They receive $3\frac{1}{2}$ hours of instruction in Hebrew subjects and $2\frac{1}{2}$ in Yiddish subjects during the week.

We also tested four classes in school C (N=54) which is the largest Jewish afternoon school in Montreal. We will refer to these classes as Class C(8A), Class C(8B), Class C(9A), and Class C(9B), with the number denoting grade, A and B standing for the "better" and the "poorer" classes of students, respectively. In this school the children receive four hours of instruction in Jewish subjects during the week. Most pupils have been attending this afternoon school since grade one.

The students were divided into better and poorer classes when they completed grade two. It was important for us to understand on what basis this classification was made. We therefore compared the classes on the following variables: Verbal Reasoning (variable 5), Psi-Lambda Foreign Language Aptitude (variable 7), Identification (variable 8), and Anti-Semitism (variable 9). The t tests indicate that only the differences in language aptitude are significant. The t values for the differences between the A and B classes on each grade level are significant beyond the .02 level (on two-tailed tests). It appears reasonable to conclude that the factor underlying the differences in achievement between the A and B classes is language aptitude.

Class D (N=16) was drawn from a relatively new school which is not yet well organized. Children receive four hours of instruction in Jewish subjects weekly. Level of instruction in Hebrew is very elementary, actually the lowest of all classes in our study.

RESULTS AND DISCUSSION

In order to test our hypotheses relating both ability and attitude to achievement in Hebrew, the correlations of these two classes of prediction variables with achievement measures were computed for each of our eight subsamples.

The heterogeneity of the schools in our study did not only call for statistical treatment of each group separately but also prevented us from averaging the coefficients to obtain a single estimate of the population correlation. Since some of the correlations of the prediction variables with achievement measures differed significantly from class to class, we found it unjustified to assume that "the several r 's did arise by random sampling from the same population," an assumption necessary to allow the averaging of coefficients (Guilford, 1950, p.355). Furthermore, we have also other evidence, which will be brought in later, to suggest that the schools we investigated represent samples from different populations.

Ability and Achievement

Table 1 (p.21) presents the correlations of our two indices of ability, intelligence and linguistic aptitude, with achievement measures. Linguistic aptitude as measured by the Psi-Lambda battery correlates quite highly with achievement measures for all classes except Class D. A possible explanation may be that at the very elementary level of foreign-language acquisition characteristic of the students of this class, the special linguistic talents measured by the Psi-Lambda battery do not play a significant role. At this stage general intelligence is probably the

TABLE 1

CORRELATIONS OF ABILITY VARIABLES WITH ACHIEVEMENT MEASURES

Class	A					B	C(8A)	C(8B)	C(9A)	C(9B)	D ^b		
No. of Ss ^a	16-17					9-11	13-15	11-13	12-15	11-13	11-16		
	Fluency	Pronunc. Acc.	Purity of Accent	Comprehension	Oral Skill	Teacher's ratings	Teacher's ratings	Teacher's ratings	Teacher's ratings	Teacher's ratings	Fluency	Pronunc. Acc.	Purity of Accent
Psi-Lambda	** .599	** .613	.420	*** .667	.432	*** .817	.532	* .621	.417	* .647	.250	.165	-.097
Verbal Reas.	.079	.098	.093	.492	.377	* .663	.409	*** .700	-.245	*** .774	* .661	.526	.524
I.Q.	.244	.164	.068	* .546	.321								

Note.—Two-tailed tests were applied. *Significant at or beyond the .05 level; **, .02 level; ***, .01 level.

^aFor some variables we did not obtain scores on all the Ss involved.

^bSince the ratings of the Class D teacher correlated negatively with the more objective indices of achievement based on voice recordings (Appendix A, Table VII), we do not use these ratings as valid measures of achievement.

important component of the ability factor for achievement in a foreign language, hence the high correlations of Verbal Reasoning with Fluency, Pronunciation Accuracy, and with Purity of Accent, for Class D.

We notice in the Class A rubrics in Table 1 that the correlations between Foreign Language Aptitude and Purity of Accent and Oral Skill do not reach significance. This appears to be in line with the findings of Gardner (1960) who reports insignificant correlations between each of the subtests of the Short Form Psi-Lambda battery (the same that we used) and accent characteristics. However, the Short Form does not include the Phonetic Script test which measures the "ability to 'code' auditory phonetic material in such a way that this material can be recognized, identified, and remembered over something longer than a few seconds ... [an ability which is important not only in] remembering phonetic material (words, forms, etc.) but also in mimicking speech sounds" (Carroll, 1960, pp.46-47). The auditory coding ability and the ability to mimic are obviously necessary for speech production; it therefore seems that Gardner's conclusion is not justified. As a matter of fact, in Gardner's thesis (1960) the correlation between the Spelling Clues test, which gauges the ability to produce sounds, and accent comes very close to significance, as do also the correlations of the total Short Form with Accent and with Oral Skill in the present study (Table 1).

Turning to intelligence, we observe in Table 1 that for Class A (which is at a sufficiently advanced level of proficiency in Hebrew to make possible a distinction among several aspects of linguistic skill) both Verbal Reasoning and I.Q. show differences in their correlations among various aspects of performance in Hebrew. Both indices of intelligence

correlate highly with Comprehension of Hebrew and with Oral Skill but not with Fluency, Pronunciation Accuracy, and Purity of Accent. This finding appears to support the notion, mentioned in the Introduction, of a differential role of intelligence in various language domains, with success in the more cognitive tasks, represented by Comprehension, being more dependent on intelligence than success in tasks involving mainly oral production. The considerable magnitude of the correlations of Verbal Reasoning and of I.Q. with the Oral Skill ratings is probably due to the fact that these ratings were assigned by the teacher who, very likely, took into account to some extent the cognitive aspects of oral proficiency, such as the ideas a student expresses and the way he presents them.

The high correlations between intelligence and achievement measures of Class D were already discussed when we treated linguistic aptitude. The correlations between Verbal Reasoning and teachers' overall ratings for each of Classes B, C(8B), and C(9B) are significant, and for Class C(8A) though the correlation is not significant, it is quite high. We are not able to explain the (low) negative correlation between Verbal Reasoning and the teacher's achievement ratings found in Class C(9A).

Attitudes and Achievement

Table 2 (p.24) summarizes the correlations between each of the attitude variables: Identification, Anti-Semitism, and Orientation, and achievement measures. The insignificant correlations of the Identification scale with all achievement indices in Classes A, B, and all C classes may be attributed to the Identification measure itself, which, as pointed out

TABLE 2

CORRELATIONS OF ATTITUDE VARIABLES WITH ACHIEVEMENT MEASURES

District	OUTREMONT					WESTMOUNT					TOWN OF MT. ROYAL		
Class	A					B					D		
	Fluency	Pronunc. Acc.	Purity of Accent	Comprehension	Oral Skill	Teacher's ratings	Teacher's ratings	Teacher's ratings	Teacher's ratings	Teacher's ratings	Fluency	Pronunc. Acc.	Purity of Accent
Identification	-.037	-.183	-.018	.328	.157	.262	.264	.010	.111	.248	-.535	-.280	-.325
	*			**	*	*	*						
A-S	-.504	-.488	-.438	-.589	-.495	-.682	-.576	-.084	-.160	-.075	.076	-.277	-.065
							**	*	*				
Orientation ^c	-.329	-.143	-.078	.203	-.054	-.405	-.612	.632	-.514	-.371	-.031	.206	.225

Note.—Two-tailed tests were applied. *Significant at or beyond the .05 level; **, .02 level.

^aNo. of Ss" row, and notes a and b in Table 1 (p.21) apply also to this table.

^cCorrelation positive if "integrative" orientation related to achievement; correlation negative if "instrumental" orientation related to achievement.

in the Materials section, is a poor scale. The high negative correlation between Identification and Fluency for Class D may be accounted for by the negative correlation ($-.842$) between Identification and Verbal Reasoning (Appendix A, Table VII). In fact, when the negative correlation between Identification and Verbal Reasoning is partialled out, the remaining correlation between Identification and Fluency is $+.134$.

The correlations of the Anti-Semitism (A-S) scale and of the Orientation index with achievement measures seem to be dependent upon particular classes. The significant correlations of the A-S scale lie in the columns of Classes A, B, and C(8A), and the significant correlations of the Orientation index in the columns of Classes C(8A), C(8B), and C(9A). One way to explain the variations from class to class with regard to which of the attitudinal variables, Anti-Semitism or Orientation, is a reliable predictor of achievement in Hebrew, would be to attribute these variations to the operation of chance factors. However, since the same attitude questionnaire may be perceived differently by different groups of Ss, it seems advisable to attempt to relate the differential findings to differential characteristics of the children in the various schools. In what follows we will, therefore, describe certain relevant features of the home backgrounds of the pupils in our samples. (This description will be based on the personal information in the files of our Ss.) Then we will proceed to discuss the attitudes of the Jews in the various districts of Montreal where the schools of our study are located. In the face of lack of any material about the Town of Mount Royal Jewish congregation where Class D is located, we will

not be able to relate the insignificant correlations of the A-S scale and of the Orientation index with performance measures in Class D to the attitudes of the Jewish population in this district.

Occupations of the Class A and Class B pupils' fathers are concentrated mainly in small business and also in semi-skilled independent professions, such as butcher, watchmaker, and taxi-driver. Most parents of these children are European born. In addition to English, which is the main language spoken in the homes of these children, Yiddish is also used in every-day communication among some members of the family. The Class B pupils sometimes mention Yiddish as the main language in their homes.

School C is affiliated with the "largest and wealthiest conservative synagogue" in Montreal (Seidel, 1939) and is located in a well-to-do suburb. Fathers are mainly professionals or successful businessmen. Most pupils are third generation North-Americans, and English is the main language in their homes, with Yiddish playing a very minor role.

In the following paragraphs we will attempt to compare the Jews sending their children to the three schools described with regard to their feelings about their Jewishness. Our main source for this discussion is Seidel's thesis (1939) on the various districts of Jewish settlement in Montreal. Although Seidel carried out her study in 1939, many of her observations appear to be still relevant in 1960. Populations of some areas have probably changed since 1939 but the inhabitants of any given area apparently bear socio-psychological characteristic similar to those

of their predecessors.⁴

The locations of the schools and the areas from which they draw their students can be divided into three sections: (a) Outremont and vicinity (Classes A and B); (b) Westmount (School C); and (c) Town of Mount Royal (Class D). Seidel has defined Montreal's districts in terms of successive settlement of Jews in them. In her demarcation, Outremont and vicinity comprise the "third area of settlement" and Westmount the "fourth area of settlement." There was no Jewish community in the Town of Mount Royal when Seidel did her investigation.

Seidel has shown that "differences in adjustment and assimilation between different elements within the Jewish community . . . coincide rather closely with those of successive areas of settlement in the city" (p.1).⁵

The parents of our students in the Outremont district have adopted some of the externals of the "new world." They have shaken off numerous features of their "old country" Jewish background and have achieved some measure of economic success. However, they still bear revealing traces of their old-fashioned background which they dislike, strive to free

⁴It should be mentioned that Trayon (1955) has documented with empirical evidence a similar phenomenon in the San Francisco Bay Area. He points out that "the evidence clearly reveals a high degree of constancy of social structure over a period of 15 years even in the face of much population shifting in the social areas and even after a socially chaotic decade of total war" (p.3).

⁵Trayon (1955) regards the correspondence between geographical residence and psychological features as a phenomenon generally characteristic of urban populations.

themselves of and to become similar to the Westmount Jewry, their social and economic model. The Outremont Jews who are sending their children to Classes A and B of our study take their Jewishness and the Jewish education of their children as a matter of fact. The children probably develop similar attitudes through the extensive Jewish education that they have received. The children of both Outremont classes have been attending all-day Jewish classes for seven or nine years, compared to only a few hours of Jewish education weekly that the Westmount children have been receiving through their school years.

The Jews from Westmount (School C) are already second generation North Americans and have adapted to the American culture to a considerable extent. In their physical appearances and in their manners they resemble their non-Jewish neighbours; also their accents are indistinguishable from those of other Canadians. Whereas the Outremont Jews refer themselves to the Westmount Jews, the Westmount Jews seem to have gentiles as their reference points, to a great extent. Related to this is their supposed self-consciousness of being Jewish.

The differences in the characteristics of the Jewish populations in these two districts of Montreal, Outremont and Westmount, may possibly account for some of our results in the last two rows of Table 2 showing differences from school to school in the sensitivity of the Anti-Semitism scale and the Orientation index as predictors of Hebrew achievement.

Many children in the Outremont schools (Classes A and B) can be expected to adopt their parents' conflicting and self-derogatory feelings and express them on the A-S scale. The results suggest that to the extent that they do show anti-Semitic attitudes, the more likely they will do

poorly in Hebrew.

We cannot be certain about the dynamic process underlying the expression of these attitudes. When the children express devaluational opinions about Jews, do they include themselves also, or is it a projection on the "other"⁶ Jews? There is evidence that Jewish self-hatred is related to thinking in terms of an ingroup-outgroup dichotomy. Radke-Yarrow and Lande (1953), using California A-S items applicable to Jewish college students, found a significant correlation of .58 between this scale and the F-scale. Adelson (1953) also thinks that "authoritarianism is a critical dimension underlying attitudes toward Jewishness." The "authoritarian" Jew speaks of two kinds of Jews: an ingroup, to which desirable characteristics are attributed, and a derogated outgroup. "The function of the dichotomization process permits the mechanisms of projection and displacement to come into play."

Our speculation that the Outremont Jews whom we studied feel that they are a part of the Jewish group and are not occupied with becoming more or less so, may explain the insensitivity of the Orientation index for Classes A and B. The content of this index is best expressed by one of the "integrative"⁷ items: "I learn Hebrew because I want to become more a part of the Jewish culture." As we understand it, these Ss feel

⁶Many, or even all, newly immigrated ultra-orthodox Jews to this city live in Outremont, so that they can represent the negative reference objects for these Ss. (These particular Jews are not sending their children to any of the schools in our study.)

⁷As will be explained later, the "instrumental" orientation items in the case of Hebrew also measure a desire to become more integrated in the Jewish culture and group.

that they are a part of the Jewish culture and are not concerned with integrating more or less into it, so that this index cannot be regarded as measuring for them a latent variable around which psychological processes are organized (which is how an attitude is viewed, see Green, 1954). We therefore assume that the variance obtained on this scale is primarily error variance.

To the extent that the Westmount Jews do not have conspicuous Jewish characteristics which they could project on "other" old-fashioned Jews, there is little reason why anti-Semitic attitudes should play a significant role for their children (the students of the C Classes). Our Ss from Westmount are also too remote, both socially and geographically, from the potential "other" old-fashioned Jews to relate themselves to them. Thus it seems that the variance on the A-S scale for the Westmount students is primarily an error variance. Class C(8A) with its significant negative correlation between the A-S scale and the teacher's rating seems to be an exception to the other Westmount classes, which we are not in position to explain.

Since the Westmount Jews are concerned with the dimension of integration in the Jewish culture, of which Hebrew certainly is a basic component, one would predict that the Orientation index which deals with the reasons for studying Hebrew will tap true variance for the Westmount children. Note should be taken, however, of the particular correlations of the Orientation index with achievement in the four classes of the Westmount school. We hypothesized a positive correlation between the Orientation index and achievement, indicating that the "integrative" motive which expresses a desire to become more a part of the Jewish

group is more conducive to success in Hebrew than the "instrumental" motive. The correlations in the opposite direction shown in Table 2 seem to contradict our hypothesis. However, a reconsideration of the "integrative-instrumental" distinction as defined by our Orientation index leads us to conclude that the "instrumental" items in the case of Hebrew really indicate a greater desire to integrate with the Jewish group than the "integrative" items. Wanting to get jobs requiring knowledge of Hebrew (an "instrumental" reason for studying Hebrew) means becoming a rabbi, a Hebrew teacher or engaging in other Jewish professions, which obviously involves more participation in the Jewish culture and group than the more idealistic and vague purposes of becoming "more a part of the Jewish culture" (an "integrative" reason). This may explain the negative correlations between the Orientation index and the teachers' achievement ratings for Classes C(9A) and C(8A). The correlation of the Orientation Index with the teacher's ratings of Hebrew achievement for Class C(8B) is positive, indicating a relation of achievement with the "integrative" motive, and the correlation for Class C(9B) is not significant; both results are contrary to the point of view we are now taking. These results are probably due to the awareness of the class B students of their being poorer in Hebrew than their class A counterparts, which, very likely, causes them not to choose professions requiring proficiency in Hebrew (or other languages, since they are inferior in linguistic aptitude in general).

Language Aptitude and Anti-Semitism

From among the numerous intercorrelations of the variables in the present study, we will discuss only one which has a direct bearing on our thesis. Using all Ss involved ($N=95$) we obtained a correlation of $-.293$ (significant beyond the .01 level) between the Psi-Lambda Foreign Language Aptitude Battery and the Anti-Semitism scale. This correlation may be indicative of a causal relationship between language aptitude and anti-Semitism. The ability of a pupil to master the Hebrew language is a prerequisite to whatever success he may have in Hebrew school. The Hebrew school is inseparable from the Jewish community, and whatever attitude a student develops toward the Hebrew school holds for the Jewish community at large. Possibly, the high-scorer on language aptitude finds it easier to learn Hebrew, he does well in Hebrew school, gets rewarded for his ability and comes to attach positive valence to the Hebrew school and the Jewish community, an indirect source of reinforcement. His favorable attitude to the Jewish group expresses itself as a low score on the A-S scale. On the other hand, students who are poorly equipped with linguistic skill find it harder to learn Hebrew; they likely associate the language and the Hebrew school with frustrating experiences which, when generalized as an attitude to the Jewish group, yield high scores on the A-S scale.

In the Introduction we entertained the notion of generalization of the attitudes one holds toward a community to its language. Our present finding suggests that the generalization process may work also in the opposite direction, from a language to the language community.

SUMMARY

The importance of attitudes towards the community whose language one is learning was explored theoretically and placed in the context of contemporary thinking of psychologists and linguists.

A study was conducted with Jewish grade eight and nine Montreal high school students learning Hebrew. They were administered two groups of tests: (a) attitude tests which measure their reasons for learning Hebrew and their attitudes toward the Jewish culture and community, and (b) ability measures including intelligence and language aptitude tests. These tests were correlated with measures of achievement in the Hebrew language. The results support our predictions about the relation of both ability and attitude to success in learning Hebrew. However, whereas intelligence and linguistic aptitude are relatively stable predictors of success, the attitude measures are less stable and vary from school to school and from class to class. We attempted to explain these differences through considerations of the socio-psychological characteristics of the Jews in the various districts of Montreal where the schools are located and the particular features of some classes.

APPENDIX A
CORRELATION MATRICES

TABLE I
CORRELATION MATRIX - CLASS A
(N varies from 16 to 17)

	1	2	3 ^a	4	5	6	7	8	9	10	11
1. Identification scale —		-.284	.233	.040	.603**	.184	-.037	-.183	-.018	.328	.157
2. Anti-Semitism scale			-.095	-.457	-.273	-.273	-.504*	-.488	-.438	-.589**	-.495*
3. Orientation index				-.081	.285	.253	-.329	-.143	-.078	.203	-.054
4. Psi-Lambda battery					.467	.609**	.599**	.623**	.420	.667***	.432
5. Verbal Reasoning test						.789***	.079	.098	.093	.492	.377
6. I.Q.							.244	.164	.068	.546*	.321
7. Fluency								.925***	.867***	.629***	.737***
8. Pronunciation Accuracy									.906***	.656***	.792***
9. Purity of Accent										.637***	.795***
10. Comprehension											.809***
11. Oral Skill											

Note.—Two-tailed tests were applied. *Significant at or beyond the .05 level; **, .02 level; ***, .01 level.

^aCorrelation positive if "integrative" orientation related to achievement; correlation negative if "instrumental" orientation related to achievement.

TABLE II

CORRELATION MATRIX - CLASS B

(N varies from 9 to 11)

	1	2	3	4	5	6
1. Identification scale	—	^{**} -.784	-.055	-.031	.426	.262
2. Anti-Semitism scale		—	.233	-.479	.618	-.682 [*]
3. Orientation index			—	-.474	-.503	-.405
4. Psi-Lambda battery				—	.638	.817 ^{***}
5. Verbal Reasoning test					—	.663 [*]
6. Teacher's ratings						—

The notes under Table I apply also to this table.

TABLE III

CORRELATION MATRIX - CLASS C(8A)

(N varies from 12 to 15)

	1	2	3	4	5	6
1. Identification scale	—	-.581*	.087	.233	.242	.264
2. Anti-Semitism scale		—	.521*	-.232	.094	-.576*
3. Orientation index			—	-.164	.011	-.612**
4. Psi-Lambda battery				—	.613*	.532
5. Verbal Reasoning test					—	.409
6. Teacher's ratings						—

The notes under Table I apply also to this table.

TABLE IV

CORRELATION MATRIX - CLASS C(8B)

(N varies from 7 to 13)

	1	2	3	4	5	6
1. Identification scale	—	-.149	-.438	.135	.367	.010
2. Anti-Semitism scale		—	.186	-.839**	.109	-.084
3. Orientation index			—	.005	-.070	.632*
4. Psi-Lambda battery				—	.190	.621*
5. Verbal Reasoning test					—	.700**
6. Teacher's ratings						—

The notes under Table I apply also to this table.

TABLE V

CORRELATION MATRIX - CLASS C(9A)

(N varies from 13 to 15)

	1	2	3	4	5	6
1. Identification scale	—	-.640**	-.237	-.268	-.471	.111
2. Anti-Semitism scale		—	.469	.009	.317	-.160
3. Orientation index			—	-.209	.262	-.514*
4. Psi-Lambda battery				—	.580*	.417
5. Verbal Reasoning test					—	-.245
6. Teacher's ratings						—

The notes under Table I apply also to this table.

TABLE VI

CORRELATION MATRIX - CLASS C(9B)

(N varies from 9 to 11)

	1	2	3	4	5	6
1. Identification scale	--	-.072	.269	.648*	.387	.248
2. Anti-Semitism scale		--	.293	.012	-.203	-.075
3. Orientation index			--	-.013	-.135	-.371
4. Psi-Lambda battery				--	*** .825	* .647
5. Verbal Reasoning test					--	*** .774
6. Teacher's ratings						--

The notes under Table I apply also to this table.

TABLE VII
CORRELATION MATRIX - CLASS D
(N varies from 11 to 16)

	1	2	3	4	5	6	7	8	9
1. Identification scale	—	-.279	.267	-.512	-.842 ^{***}	-.535	-.280	-.325	-.001
2. Anti-Semitism scale		—	-.208	.068	.187	.076	-.277	-.065	.246
3. Orientation index			—	-.136	.000	-.031	.206	.225	-.044
4. Psi-Lambda battery				—	.584 [*]	.250	.165	-.097	-.160
5. Verbal Reasoning test					—	.661 [*]	.526	.524	-.291
6. Fluency						—	.769 ^{***}	.692 ^{**}	-.229
7. Pronunciation Accuracy							—	.746 ^{***}	-.253
8. Purity of Accent								—	-.049
9. Teacher's ratings									—

The notes under Table I apply also to this table.

APPENDIX B
ATTITUDE QUESTIONNAIRES

IDENTIFICATION SCALE

1. The re-creation of the Jewish state in Palestine was one of the greatest and most thrilling events of our time.
2. A Jewish education is very important for a Jew.
3. Hebrew is an old-fashioned language that holds no interest for me.
4. The Jew's first loyalty should be to Jewry rather than to the country he lives in.
5. I find it harder to live with Jews than with gentiles.
6. I feel that being born a Jew will interfere with my search for happiness.
7. Jews should not speak Yiddish in public with non-Jews nearby.
(Places such as buses, etc.)
8. Judaism is a rich and precious culture which measures up to any of the other great world cultures.
9. A Jew should be proud of being born of Jewish stock.
10. I frequently feel that it is too bad that I have to belong to the Jewish group.
11. A Jew should consider it a special honour to have Gentile friends.
12. Every Jewish family should be affiliated with one or more Jewish organizations.
13. Every Jewish youngster who grows up in this country should become equally acquainted with Jewish history as well as with Canadian history.
14. Judaism is not much more than a set of rules about what you can or cannot eat.

15. A Jewish education is an unnecessary burden to anyone who intends to spend the rest of his life in Canada.
16. Jews throughout the ages have died for their faith, and their people were every bit as heroic as any of the world's greatest heroes.

ANTI-SEMITISM SCALE

1. There are few exceptions, but in general, Jews are pretty much alike.
2. Jews seem to prefer the most luxurious and extravagant way of living.
3. It bothers me to see other Jews behaving in a typically Jewish manner.
4. A major fault of the Jews is their conceit, over-bearing pride, and their idea that they are a chosen race.
5. Jewish power and control in money matters is far out of proportion to the number of Jews in the total population.
6. Jews tend to lower the general standard of living by their willingness to do the least respected work and to live under standards that are far below average.
7. One thing that had hindered the Jews from establishing their own nation is the fact that they really have no culture of their own; instead, they tend to copy the things that are important to the native citizens of whatever country they are in.

ORIENTATION INDEX

I AM STUDYING HEBREW

1. because one can enjoy a more successful life in the community with a knowledge of Hebrew.
2. because Hebrew is necessary to keep the Jewish people together.
3. because in the future it may prove useful in getting a job.
4. because I want to become more a part of the Jewish culture.
5. because in order to be a good Jew I have to know Hebrew.
6. because I wish to enter a profession in which it is necessary to be familiar with Hebrew.

APPENDIX C**IDENTIFICATION SCALE - ITEM ANALYSIS**

IDENTIFICATION SCALE - ITEM-ANALYSIS

Item No. ^a	S ²	r with the total Scale
1	.648	.336
2	.468	.477
3	.708	.498
4	1.196	.415
5	1.080	.104
6	.385	.416
7	1.068	.457
8	.548	.380
9	.232	.439
10	.410	.570
11	1.265	.387
12	.762	.337
13	.588	.455
14	.448	.307
15	.646	.458
16	.378	.286

^aThe items were presented in Appendix B.

REFERENCES

- Adelson, J. A study of minority group authoritarianism. J. abnorm. soc. Psychol., 1953, 48, 477-485.
- Adorno, T.W., Frenkel-Brunswik, E., Levinson, D.J., & Sanford, R.N. The authoritarian personality. New York: Harper, 1950.
- Bennett, G.K., Seashore, H.G., Wesmen, A.G. Manual for the differential aptitude tests. New York: The Psychological Corporation, 1959.
- Bogo, Norman. Evaluational reactions to accented English speech. Submitted for publication in Undergraduate research projects in psychology. Vol. 2. Psychology Department, McGill University, 1960.
- Carroll, J.B. Summary of validity coefficients - foreign language aptitude battery. Harvard University, 1956 (mimeographed). (a)
- Carroll, J.B. Intercorrelations, means, and standard deviations for [Psi-Lambda] subtests, [Psi-Lambda] foreign language aptitude index, and criterion rating (final grades) after language training ... Harvard University, 1956 (unpublished tables). (b)
- Carroll, J.B. [Review of] "The measurement of meaning," by A.E. Osgood, G.J. Suci, and P.H. Tannenbaum. Language, 1959, 35, 58-77.
- Carroll, J.B. The prediction of success in intensive foreign language training. Prepared for a Symposium on Training Research, University of Pittsburgh, 1960. (Final revision). Harvard University, 1960 (mimeographed).
- Carroll, J.B., & Sapon, S.M. Supplement 1 to examiner's manual - Psi-Lambda foreign language aptitude battery. Harvard University, 1956 (mimeographed).

- Christophersen, Paul. Bilingualism. London: Methuen, 1948.
- Dunkel, H.B. Second-language learning. Boston: Ginn, 1948.
- Ervin, Susan. Identification and bilingualism. Harvard University, 1954 (mimeographed).
- Ervin, Susan. The verbal behavior of bilinguals: content differences in TAT stories told by adult French bilinguals in French and in English. Mimeographed paper delivered at the convention of the American Psychological Association, 1955.
- Ferguson, G.A. Notes on a simple method of scale construction. McGill University, 1959 (unpublished manuscript).
- Gardner, R.C. Motivational variables in second-language acquisition. Unpublished Ph.D. thesis, McGill University, 1960.
- Gardner, R.C., & Lambert, W.E. Motivational variables in second-language acquisition. Canad. J. Psychol., 1959, 13, 266-272.
- Geismar, Ludwig. A scale for the measurement of ethnic identification. Jewish social Studies, 1954, 16, 33-60.
- Green, B.F. Attitude measurement. In Gardner Lindzey, (ed.), Handbook of social psychology. Vol. 1. Cambridge, Mass., Addison-Wesley, 1954. Pp. 335-369.
- Greenberg, J.H. Essays in linguistics. Chicago: University of Chicago Press, 1957.
- Guilford, J.P. Fundamental statistics in psychology and education. New York: McGraw-Hill, 1950.
- Henmon, V.A.C. Prognosis tests in the modern foreign languages. Publications of the American and Canadian Committees on Modern Foreign Languages, 1929, 14, 3-31.

- Huse, H.R. Reading and speaking foreign languages. Chapel Hill, University of North Carolina Press, 1945.
- Jones, F.E., & Lambert, W.E. Attitudes toward immigrants in a Canadian community. Publ. Opin. Quart., Winter 1959, 23, 537-546.
- Lambert, W.E. Developmental aspects of second-language acquisition:
- I. Associational fluency, stimulus provocativeness, and word-order influence. J. soc. Psychol., 1956, 43, 83-89. (a)
- Lambert, W.E. Developmental aspects of second-language acquisition:
- II. Associational stereotypy, associational form, vocabulary commonness, and pronunciation. J. soc. Psychol., 1956, 43, 91-98. (b)
- Lambert, W.E. Developmental aspects of second-language acquisition:
- III. A description of developmental changes. J. soc. Psychol., 1956, 43, 99-104. (c)
- Lambert, W.E., Hodgson, R.C., Gardner, R.C., & Fillenbaum, S. Evaluational reactions to spoken languages. J. abnorm. soc. Psychol., 1960, 60, 44-51.
- Lewin, Kurt. Resolving social conflicts. New York: Harper, 1948.
- Monroe, W.S. (ed.). Prognosis. In Encyclopedia of educational research. New York: Macmillan, 1950. Pp. 874-894.
- Newcomb, T.M. Motivation in social behavior. In Current theory and research in motivation. Lincoln: University of Nebraska Press, 1953. Pp. 139-161.
- Nida, E.A. Some psychological problems in language learning. Language Learning, 1957-1958, 8, 7-16.

- Radke-Yarrow, M., & Lande, B. Personality correlates of differential reactions to minority group-belonging. J. soc. Psychol., 1953, 38, 253-272.
- Sapir, Edward. Language. In Encyclopedia of social sciences. Vol. 9. New York: Macmillan, c1933. Pp. 155-169.
- Sarnoff, I. Identification with the aggressor: Some personality correlates of anti-semitism among Jews. J. Pers., 1951, 20, 199-218.
- Seidel, Judith. The development and social adjustment of the Jewish community in Montreal. Unpublished Master's thesis, McGill University, 1939.
- Tryon, R.C. Identification of social areas by cluster analysis; a general method with an application to the San Francisco Bay Area. University of California Publications in Psychology, 1955, 8, No. 1, 1-100.
- Vachon-Spilka, Irene. Communication aux membres de l'Association Canadienne de Linguistique. Saskatoon, 1959 (mimeographed).
- Weinreich, Uriel. Languages in contact. New York: Linguistic Circle of New York, 1953.
- Whatmough, Joshua. Language: a modern synthesis. New York: New American Library, 1956.
- Whyte, W.F., & Holmberg, A.R. Human problems of U.S. enterprise in Latin America. Human Organization, 1956, 15, No. 3, 1-40.