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The Role of Orientations
in Second Language Learning

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of the University of Ottawa in partial fulfillment
of the requirements for the degree of
Master of Arts in Psychology

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ABSTRACT

Studies which compare the importance of various orientations to second language acquisition have obtained contradictory results. In the present study, these are traced to definitional ambiguities related to the concept of orientations, and to the different milieux where second language learning has taken place. This study was therefore designed to assess the influence of the milieu (unilingual English vs unilingual French) on Anglophones reasons for learning French as a second language, and their relationship to motivation and competence. The subjects were 200 grade 11 students, with 163 from a unilingual English milieu, and 37 from a unilingual French milieu. The ratings given to 36 reasons for learning French were factor analyzed separately for each sample and composite scores reflecting the composition of the factor scores were correlated with indices of motivation and competence. Results indicate that three factors were common to both samples: an intellectual factor, as well as the integrative and instrumental orientations. The sample from the unilingual French milieu is characterized by self-actualization, integrative, and sociability orientations, while the sample from the unilingual English milieu is distinguished by an orientation identified as influence-seeking. The orientations found to be the best predictors of motivation were not the best predictors of competence. These results are discussed in relation to recent theories of inter-group relations, and in terms of their implications for further studies on orientations.

INTRODUCTION

Second language acquisition has, in recent years, become a popular research topic. Studies in this area seem particularly appropriate in Canada because it is a country in which cultural diversity is valued. With two official languages in use, many individuals have the opportunity to learn either French or English as a second language. Researchers have therefore concerned themselves with delineating aspects which might influence the acquisition of a second language. One such aspect is motivation.

Gardner and Lambert (1959) were among the first to conduct research on the role of motivation in second language acquisition. They hypothesized that an individual's motivation to acquire a second language was dependant upon his attitude toward the second language group. In a study, they administered to a group of grade 11 Anglophones in Montreal a battery of tests to measure language aptitude, motivation, and attitudes. The results were factor analysed, together with the teachers' ratings of the students' ability to speak and understand French. Two factors were found to be associated with proficiency in French. The first factor, defined by variables of aptitude and intelligence, supported Carroll's proposition (1958) that aptitude is an important determinant of proficiency in a second language. In the second factor, attitudes towards French Canadians, a motivation to learn French, and an integrative

orientation (i.e. a personal interest in the second language group, and a strong desire to identify with its valued members) were also found to be related to proficiency in French. This particular cluster of variables associated with proficiency was later proposed to reflect an 'integrative motive'. (See Gardner, 1966; Gardner and Smythe, 1975).

More recent findings on second language learning (Gardner and Smythe, 1975; Gardner, Smythe, Clément, and Glikzman, 1976) have confirmed that students characterized by an integrative motive were perceived as being more interested in the French lessons, seemed to be more persistent in second language studies, and their motivation was at least as important as language aptitude, in determining individual differences in achievement in the early stages of second language learning. Such individuals also express positive attitudes towards the second language group and an interest in communicating with members of the second language community.

After further studies and a national survey of attitudes and motivation in Canada, Gardner (Gardner, 1979a, p.308) proposed the following model to describe the individual's motivational process:

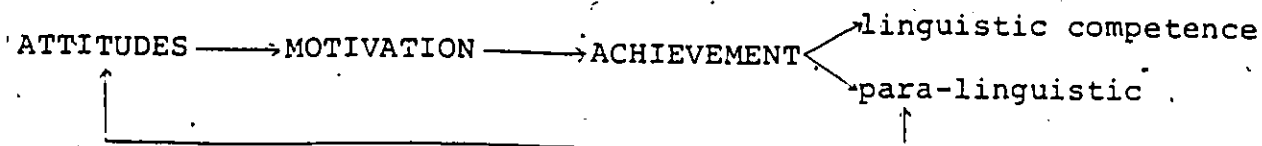


FIGURE I

Schematic Representation of
Individual Motivational Process.

This model describes the motivational mechanism in terms of a linear sequence of processes. Individual differences in attitudes give rise to individual differences in motivation, and these are responsible for variations in achievement. This achievement, in turn, can influence the individual's attitude. Attitudes therefore maintain the desire and effort necessary to learn a second language.

An alternative conceptualization of motivation would be the goal-directed model, in which individual "reasons" for learning the second language constitute the motivational basis. An analysis based on the concept of "reason" provides a clearer, more detailed understanding of the individual's motivational process. While attitudes refer to generalized, affective predispositions, "reasons" refer to specific outcomes expected to result from specific actions. Because of this greater conceptual precision, it is possible to study fine variations in the reasons given for learning a second language. From the point of view of conceptual precision, a formulation of motivation in terms of goal-orientation therefore constitutes

a more precise observational tool than do generalized attitudes. Furthermore, with the practical knowledge obtained by the use of such a tool, it might be possible to apply such information to second language teaching methods, and to motivating the students by organizing programmes specifically tailored to their needs.

The goal-oriented approach can be traced back to Lewin's (1951) theory. Lewin proposed that an individual's life space could be thought of as a field made up of areas of different valences. This valence refers to the attractiveness of an area. If acts, situations, and objects are all considered to be areas of the individual's life space, the tendency or motivation to behave in a certain way will be a function of the valence of this act (i.e. the attractiveness of this act). In further elaborations (see Peak, 1955; Rosenberg, 1956), attraction towards an act is considered to be a multiplicative function of the probability of attaining goals consequential to this act, and the subjective value of these goals. This is known as the expectancy-value approach. (Atkinson, 1964; Weiner, 1972).

In terms of an expectancy-value model, an individual would be motivated to learn a second language because he is attracted to achieve competence in it. This attraction is a function of the perceived probability that such competence will facilitate the attainment of certain goals, and the value attributed to these goals. Gardner and Lambert (1972), have referred to clusters of such reasons as the individual's

orientations to learning a second language. One such orientation is the integrative orientation mentioned above, which was proposed as the best predictor of second language achievement. In the integrative orientation, the individual wants to learn a second language not only because of an interest in the second language group, but also wishes to identify himself for affective reasons, with its members. For example, one might learn French in order to become a member of the French Canadian community.

Studies on the role of motivation in second language acquisition have proliferated since Gardner and Lambert's (1959) research, and it is now suggested that other orientations might influence second language learning. Indeed, Gardner and Lambert (1972) suggested that certain individual's needs to control and dominate members of the other culture, a manipulative orientation might also exist. As empirical support for this contention, Clement (unpublished) found such a manipulative orientation among anglophone university students in London, Ontario. This was a factor analytic study of the reasons given for learning a second language and the particular factor identified as manipulative received negative loading from the reason 'Converse with more and varied people' and positive loadings from reasons such as 'Dominate individual francophones' and 'Be successful in the political arena'. Still another goal for learning a second language might be for intellectual achievement totally unrelated to pragmatic or cultural goals such as to become a more knowledgeable person. Gardner and Santos (1970) found that for Filipino students in the Philippines, those competent in English were those learning it for pragmatic and integrative

reasons, such as for good employment. This orientation was referred to as "instrumental". Both the integrative and instrumental orientations were also associated with language proficiency among Franco-Americans learning French as a second language (Gardner and Lambert, 1972).

Although it is now widely accepted (e.g. McNamara, 1975; Taylor, 1975; Oller, Hudson, and Liu, 1977) that integrative and instrumental orientations influence motivation to learn a second language, the prepotency of the former over the latter has not gone unchallenged. Certain studies (Lukmani, 1972; Gardner and Lambert, 1972, the Maine studies) have shown the importance of an instrumental orientation, while in another (Oller et al, 1977), a negative relationship was found between the integrative orientation and achievement. Finally, in a study by Chihara and Oller (1978) no relationship between integrative and instrumental orientations and competence was found.

These results, which contrast with Gardner and Lambert's original theoretical framework can partially be explained by the definitional ambiguities pertaining to the concept of the integrative orientation. Although authors seem to agree as to what constitutes instrumental reasons for studying a second language, there appears to be little agreement as to what constitutes an integrative reason. It seems that any goal which is not pragmatic is automatically classified as integrative. Gardner points out that while travel abroad was classified as instrumental by Lukmani (1972), it was

interpreted as integrative by Burstall et al (1974). As mentioned by Oller et al (1977), reasons such as "having friends who speak English", "knowing more about English art, literature and culture" could be classified in either category depending on the intent and understanding of the respondent. Due to this ambiguity, it is difficult to compare orientations found in the above-mentioned studies and to properly identify the importance of the integrative and instrumental orientations. One possible solution is to define the orientations through an interpretation of the reasons found to cluster together in a given setting. Thus, reasons which would be strongly correlated with identity and affective goals would be interpreted as reflecting an integrative orientation whereas reasons associated with those pertaining to pragmatic goals would be identified as components of an instrumental orientation.

Another explanation for the contrasting results described above is that the pattern of relationship between orientations and achievement in a second or foreign language might vary as a function of the context in which the learning takes place. In these studies, a variety of populations and situations are found. Learning English as a second language in the United States (Oller et al 1977) is a completely different experience to learning it as a foreign language in one's own country (Spolsky, 1969; Lukmani, 1972; Chihara et al, 1978). It would therefore appear that the milieu where language learning occurs influences the reasons for second

or foreign language acquisition. Although Gardner (1979) has proposed that the social milieu does play an important role in the acquisition of a second language, it has received little attention as a factor likely to influence his orientation to second language learning.

In an attempt to construct a framework describing the effects of the milieu on inter-group communication, Giles, Bourhis, and Taylor (1977) introduced the concept of 'ethnolinguistic vitality'. The 'ethnolinguistic vitality' of a group is defined as "that which makes that group likely to behave as a distinctive and active collective entity in inter-group situations" (Giles et al, 1977, p. 308). 'Ethnolinguistic vitality' is a function of the social status of the language of the group (i.e. status of the language spoken by the linguistic group both within and out of the boundaries of the linguistic community), the demographic distribution of its speakers (i.e. the number of members and their distribution through the territory) and institutional support (i.e. to what extent a group receives formal or informal representation in different institutions such as churches, schools and governments). According to Giles et al (1977), a group with low social status, few members, and little institutional support (i.e. a group with weak 'ethnolinguistic vitality') could become assimilated into a language group with more 'ethnolinguistic vitality'. In terms of orientations, if the conditions prevailing in the milieu are such that the members do not fear assimilation, (i.e.

if the intergroup relationship is not a threatening one) individuals might learn the second language for integrative reasons. Such an orientation might, however, not be operative in a context where learning a second language implies the eventual assimilation of the speaker into the dominant culture.

It follows from the above that the orientations pertaining to the acquisition of a second language characterizing a specific ethnic group might vary as a function of the 'ethnolinguistic vitality' of that specific group in its milieu. The French-learning orientation of Anglophones in Québec City (unilingual French milieu) should differ from that of Anglophones in London, Ontario (unilingual English milieu) if the minority group of Anglophones in Quebec has weak 'ethnolinguistic vitality', and the majority group in London has strong 'ethnolinguistic vitality'. The former might possibly learn French for manipulative or anti-integrative reasons, while the latter might learn French for more integrative reasons.

This study was designed to investigate the relationship between orientations and milieu, and includes both a descriptive and predictive aspect. The descriptive aspect will attempt to delineate the different orientations found in two groups of Anglophones from different ethnolinguistic milieux. In the predictive aspect of the study, the relationship between orientations, motivations, and competence indices will be assessed.

METHODSubjects

The subjects in this study were 200 Anglophone grade 11 students. Of these, 37 were from La Commission Scolaire de Québec (a unilingual French milieu), and 163 from the London Board of Education (a unilingual English milieu). The two cities were chosen as representative of two different linguistic milieux.

Materials

A questionnaire composed of Likert-type scales and multiple-choice scales was administered. The full version of this questionnaire appears in Appendix A. A short description of the scales follows:

Orientations: The following is a list of 36 different reasons for learning French included in the questionnaire. These Likert-type items were chosen from items used in previous research (Gardner and Smythe, 1975; Chihara and Oller, 1978; Spolsky, 1968; Lukmani, 1972; Burstall, Jamieson, Cohen, Hargreaves, 1974; Carroll, 1975).

Studying French can be important for me because:

- (1) be more at ease with fellow Canadians who speak French
- (2) know how people live in French speaking areas
- (3) go to high school
- (4) get a good job
- (5) for my future career

- (6) become a member of the French Canadian community
- (7) help me study other languages
- (8) understand French Canadians
- (9) go to France
- (10) be a more knowledgeable person
- (11) like to meet French people
- (12) know problems French people have in an English speaking country
- (13) get a degree
- (14) understand my own language more
- (15) make friends with French people
- (16) make me appear more cultured
- (17) successful in business
- (18) useful once school is finished
- (19) be more educated
- (20) useful to travel
- (21) get a job where I can use French
- (22) make friends with French Canadians
- (23) gain respect if I know another language
- (24) get to know French Canadians
- (25) become an influential member of my community
- (26) participate in activities of other cultural groups
- (27) acquire new ideas and broaden my outlook
- (28) finish high school
- (29) get a better paying job
- (30) learn about myself
- (31) gain influence over French Canadians

- (32) meet and converse with more and varied people
- (33) will help if I enter politics
- (34) think and behave like French Canadians
- (35) travel to French speaking areas
- (36) understand and appreciate French Canadians art and literature

The individual's motivation was assessed through two multiple-choice scales adapted from Gardner and Smythe (1975).

(1) Motivational-Intensity: This scale consists of 10 multiple-choice items designed to assess the amount of effort subjects felt that they expended in learning French. A high score (a maximum of 30) represented a subject's self-report of a high degree of effort expended in acquiring French.

(2) Desire to learn French: Ten multiple-choice items comprised this scale. The items were designed to assess how much the student wanted to learn French but de-emphasized the actual amount of effort involved. A high score (maximum of 30) indicated a strong desire to learn French.

Final grade-Aural/oral French: Final marks in French were obtained from the school files at the end of June. These were used as the measure of competence. It was unnecessary to standardize the results, since uniform exams were given to all subjects in each city.

Procedure

All subjects were tested in June 1978, during French class. At the beginning, an experimenter not previously acquainted with the subjects read through the general instructions on the first page of the questionnaire (see Appendix A). These instructions informed the subjects of the general aim of the study, and stressed the confidentiality of their answers. The subjects were then allotted the necessary time to complete answering the questions.

RESULTS

This research was conducted in order to study the relationship between orientations in learning a second language and the linguistic milieu where the learning takes place. Both a descriptive and a predictive aspect will be considered.

Descriptive Aspect

The purpose of the descriptive aspect was to delineate clusters of orientations in each milieu, in order to identify and define these different orientations. The correlation matrices (Appendix B) obtained from the 36 orientation items was factor analysed by means of the principal axis solution. The results from both London and Quebec will now be considered separately.

London

With this group, the factor analysis solution produced nine factors with eigenvalues greater than unity, but upon applying the "Scree Test" procedure (Catell, 1966) for determining the amount of non-trivial factors, the first five factors were rotated by means of the Varimax procedure. The resulting matrix is depicted in Table I.

Factor I receives appreciable (greater than $\pm .30$) loadings from 19 of the 36 variables. The composition of this factor suggests that students who are learning French for socio-affective reasons (variables 11, 15, 32, 24, 22, 26, 1, 8) are also interested in its usefulness while travelling (variables 9, 35, 20) and in learning about themselves (variables 10, 27, 14). They are also learning French for certain pragmatic reasons (variables 16, 7, 18, 21) and because they are interested in becoming members of the French Canadian community (variable 6). As already discussed in the introduction, integrativeness includes two components: (1) the individual must show a willingness to identify himself with members of the other language group, and, (2) this must be done for socio-affective reasons. Since both these aspects are found in this factor, it therefore appears best identified as an Integrative factor.

TABLE I
 VARIMAX ROTATED FACTOR MATRIX
 LONDON STUDENTS LEARNING FRENCH

	I	II	III	IV	V
1. be more at ease with fellow Canadians who speak french	43*	24	35	13	-06
2. know how people live in French speaking areas	29	08	60	-02	06
3. go to high school	15	15	02	-06	66
4. get a good job	19	75	-01	-14	14
5. for my future career	20	72	04	00	13
6. become a member of the French Canadian community	33	30	37	11	-02
7. help me study other languages	39	06	31	08	28
8. understand French Canadians	34	-07	60	01	-02
9. go to France	59	32	13	01	01
10. be a more knowledgeable person	66	27	07	16	16
11. like to meet French people	77	20	24	-02	-06
12. know problems French people have in an English speaking country	13	01	45	04	07
13. get a degree	05	62	02	-01	58
14. understand my own language more	47	08	22	20	21
15. make friends with French people	75	08	17	11	-03
16. make me appear more cultured	43	26	27	34	06
17. successful in business	21	66	08	26	06
18. useful once school is finished	38	60	11	09	11
19. be more educated	12	28	27	18	04


* the period has been omitted for all loadings.

	I	II	III	IV	V
20. useful to travel	41	24	17	06	11
21. get a job where I can use French	30	67	18	06	-02
22. make friends with French Canadians	51	-11	28	38	10
23. gain respect if I know another language	26	05	11	60	14
24. get to know French Canadians	52	05	49	22	07
25. become an influential member of my community	16	36	27	49	-13
26. participate in activities of other cultural groups	50	32	23	26	-07
27. acquire new ideas and broaden my outlook	27	28	43	20	10
28. finish high school	10	20	22	18	65
29. get a better paying job	03	77	-00	17	19
30. learn about myself	08	24	73	15	08
31. gain influence over French Canadians	-23	07	27	42	-10
32. meet and converse with more and varied people	67	30	31	15	01
33. will help if I enter politics	18	02	-05	41	05
34. think and behave like French Canadians	07	00	57	08	-03
35. travel to French speaking areas	57	42	13	-01	02
36. understand and appreciate French Canadian art and literature	19	04	56	07	17

Factor II receives appreciable loadings from 13 variables. It appears that students learning French for specific instrumental reasons (variables 29, 4, 5, 17, 13, 18, 25) are also interested in learning French to work in a French-speaking area (variable 21) and to travel to French-speaking areas (variables 35, 9). Finally, they also have an interest in meeting other cultural groups (variables 26, 6, 32). Due to the dominance of positive loadings on pragmatic reasons, this factor seems best identified as General Instrumental.

Factor III receives appreciable loadings from 12 variables. The composition of this factor suggests that students interested in learning French in order to learn about French Canadians (variables 8, 2, 36, 24, 12, 1, 7) and to become a member of the French Canadian community (variables 34, 6) are also interested in learning about themselves (variables 30, 27, 32). Although these students show a willingness to identify themselves with the Francophone community, due to a lack of socio-affective reasons for learning French, this factor seems best identified as Intellectual.

Factor IV receives appreciable loadings from six variables. These students are interested in learning French in order to influence French Canadians (variables 23, 25, 31, 33), to appear more cultured (variable 16) and to make French Canadians friends (variable 22). This factor might therefore be best interpreted as reflecting an Influence-seeking orientation.



Factor V receives appreciable loadings from three variables. Since these students appear to be learning French to succeed in school (variables 3, 28, 33) this factor seems best identified as a School-Instrumental factor.

Quebec

The factor analysis solution for this group produced 11 factors with eigenvalues greater than unity, but upon applying the "Scree Test" procedure, the first six factors produced by the sample were rotated by means of the Varimax procedure. The resulting matrix is depicted in Table 2.

Factor I receives appreciable loadings (greater than $\pm .60$)¹ from six of the 36 variables. The composition of this factor suggests that students learning French in order to learn about French Canadians (variables 15, 24, 36) are also interested in behaving like them (variable 34). Such students are also interested in learning about themselves (variable 30) and in becoming influential in the community (variable 25). Although positive loadings are found on variables depicting social integrative reasons, including both affective and identification aspects, this factor also evidences a salient loading from a variable depicting goals of influence (variable 25). It therefore seems best identified as an Integrative-Prestige factor.

¹ Due to the restricted sample size (N=37), a loading equal to or greater than .60 was required for a variable to be considered in the interpretation of a factor.

TABLE 2
VARIMAX ROTATED FACTOR MATRIX
QUEBEC STUDENTS LEARNING FRENCH

	I	II	III	IV	V	VI
1. be more at ease with fellow Canadians who speak French	23	-06	-02	26	-02	02
2. know how people live in French speaking areas	31	-03	76	02	03	01
3. go to high school	05	07	-03	20	13	61
4. get a good job	-02	66	-03	-12	-24	18
5. for my future career	13	77	01	-14	-18	25
6. become a member of the French Canadian community	53	36	44	-05	08	-10
7. help me study other languages	38	01	03	55	-02	-12
8. understand French Canadians	18	42	53	19	06	12
9. go to France	34	18	-25	36	35	43
10. be a more knowledgeable person	17	06	36	73	33	-07
11. like to meet French people	48	08	-05	18	-27	37
12. know problems French people have in an English speaking country	34	19	03	-10	09	14
13. get a degree	-18	44	15	-30	-11	60
14. understand my own language more	12	54	-00	31	02	07
15. make friends with French people	79	-07	01	15	00	19
16. make me appear more cultured	-04	15	34	42	-13	33
17. successful in business	-01	67	-04	17	32	-06
18. useful once school is finished	16	68	-11	10	39	16
19. be more educated	28	-02	27	-41	08	-03

	I	II	III	IV	V	VI
20. useful to travel	-02	03	12	15	82	10
21. get a job where I can use French	-07	53	26	-17	47	-11
22. make friends with French Canadians	57	-19	16	16	06	26
23. gain respect if I know another language	11	-04	65	-22	26	17
24. get to know French Canadians	67	-11	-03	-05	34	16
25. become an influential member of my community	67	-08	44	-15	12	04
26. participate in activities of other cultural groups	32	30	35	-06	35	10
27. acquire new ideas and broaden my outlook	57	28	16	21	41	-05
28. finish high school	19	25	-49	20	16	10
29. get a better paying job	-12	67	11	-09	20	-13
30. learn about myself	67	18	08	-10	17	-15
31. gain influence over French Canadians	15	19	14	-77	-06	-25
32. meet and converse with more and varied people	31	22	-03	-11	62	22
33. will help if I enter politics	11	35	-11	-23	09	12
34. think and behave like French Canadians	72	04	40	-03	-02	-12
35. travel to French speaking areas	34	10	21	-10	28	63
36. understand and appreciate French Canadian art and literature	61	18	-06	19	-15	03

Factor II receives appreciable loadings from five variables. Since all five refer to pragmatic reasons related specifically to a career (variables 4, 5, 17, 18, 29) this factor seems best identified as a Career-Instrumental factor.

Factor III receives appreciable loadings from two variables. It appears that students interested in how Francophones live (variable 2) are also interested in learning French to gain respect by learning another language (variable 23). This factor therefore seems best defined as an Intellectual-Prestige factor.

Factor IV receives appreciable loadings from two variables. Students interested in gaining more knowledge about themselves by learning French (variable 10) are not interested in doing so for manipulative reasons (variable 31). Due to the positive loading on a self-knowledge variable, this factor seems best identified as a Self-Actualization factor.

Factor V receives appreciable loadings from two variables. The composition of this factor suggests that students who learn French in order to travel (variable 20) are also interested in meeting people (variable 32). The major loadings obtained therefore seem to best qualify this factor as a Sociability dimension.

Factor VI receives appreciable loadings from three variables. Students learning French in order to travel to French-speaking areas (variable 35) appear to be interested in French for educational purposes (variables 3, 13). Due to the

positive loadings on these three variables, this factor seems best described as a School-Instrumental factor.

Predictive Aspect

In order to assess the relationship between orientations, motivation and competence, correlations were computed between the motivation and competence indices and composite scores representing, in each milieu, each of the obtained factors. These were obtained by summing the ratings obtained for only those variables with significant (i.e. $\pm .30$ for London and $\pm .60$ for Quebec) and unique loadings. A unique loading for a variable corresponds to a significant loading on a single factor. However, if two factors have significant loadings from one variable, and there was a difference of $\pm .20$, that variable was included in the composite score for the factor with the highest loading.

In the London group (see Table 3) both motivation and competence are significantly correlated ($p < .01$) with all five factors. The correlation between motivation and competence is also highly significant ($p < .01$). It should be noted, however, that Factor I (Integrative) serves as the best predictor for motivation, and that Factor IV (Influence-seeking) is the best predictor for competence.

For the Quebec group (see Table 4) the highest correlation between motivation and a specific factor is found with Factor IV (Self-Actualization). Other significant correlations are found between motivation and Factor I

TABLE 3

TABLE OF CORRELATIONS BETWEEN
COMPOSITE SCORES OF ORIENTATION
MOTIVATION AND COMPETENCE (LONDON)

Orientation	Motivation	Final Mark
Integrative	.70**	.21**
General Instrumental	.66**	.21**
Intellectual	.61**	.18**
Influence-Seeking	.51**	.31**
School Instrumental	.43**	.21**
	Final Mark	.44**

* $p < .05$

** $p < .01$

TABLE 4

TABLE OF CORRELATIONS BETWEEN
COMPOSITE SCORES OF ORIENTATION
MOTIVATION AND COMPETENCE (QUEBEC)

Orientation	Motivation	Final Mark
Integrative-Prestige	.34*	.26
Career-Instrumental	.25	.05
Intellectual-Prestige	.25	.12
Self-Actualization	.46**	.14
Sociability	.34*	-.23
School-Instrumental	.26	.40**
	Final Mark	.24

* $p < .05$
** $p < .01$

(Integrative-Prestige) and Factor V (Sociability). With the competence index, the only significant correlation is found with Factor VI (School-Instrumental). There was no significant correlation between motivation and competence.

DISCUSSION

This study has explored the predictive and descriptive aspects of a conceptualization of motivation in second language acquisition, which hinges on the goal-oriented model proposed by Lewin (1951). This approach was hypothesized to provide the clarity and precision necessary to delineate the effects of the milieu on the individual's orientation to learning a second language. Indeed, the factor analysis of the orientation items produced different solutions for two groups of Anglophones living respectively in a majority and minority setting. Furthermore, the orientations serving as best predictors of motivation and competence were also found to vary from one group to the other.

The London group (majority setting) of students and the Quebec group (minority setting) are similar, in that Integrative and Instrumental orientations were found in both. Further replicating previous results, the correlation between the Integrative orientation and the motivation index is significant in both groups. This is in agreement with previous theorizing that the Integrative orientation supports motivation to learn a second language (Gardner, 1979).

Another common factor was an Intellectual factor. This finding supports the hypothesis that orientations other than Integrative and Instrumental might influence second language learning. High School students are not only learning French for the traditional reasons but also for Intellectual reasons such as to learn about themselves, and to acquire new ideas and broaden their outlook. The importance of this new factor should not be minimized, since it shows students learning a language for personal growth reasons, and it has never emerged, or even been proposed in previous research.

Although certain similarities were apparent between students in London, and Québec, a number of differences were also found. These differences constitute the crux of the study as they shed light on the socially bound process which might be responsible for the emergence and strength of the orientations.

The London students were characterized by an influence-seeking orientation to learning French. Furthermore, this particular orientation was found to have a stronger (although not significantly so) relationship to competence than any other factor. These findings therefore suggest that in this setting, learning French in order to gain influence over French Canadians is an important determinant of second language competence.

A possible explanation for this particular outlook on second language learning is related to the socio-historical

context. On the one hand, although Anglophones in North America have long been a powerful group with strong 'ethnolinguistic vitality', it is only in recent years that Francophones have developed a strong 'ethnolinguistic vitality'. Furthermore, London students (as other students in Canada) are continuously told of the numerous advantages of being bilingual (such as national unity and bilingual bonuses). On the other hand, due to the low concentration of Francophones in this area, students in London rarely interact with French Canadians whether socially or in the work environment. Consequently, these students are learning, as a second language, the language of a group with whom they have little contact. As a result of the importance given to a rising but unknown group, students in London might feel threatened and cope with the negative affect associated with threat by learning French to gain influence over French Canadians.

This interpretation is similar to that previously suggested by Taylor, Meynard and Rheault (1977). In a study on Francophones from different linguistic milieux in Quebec, these authors assessed the extent to which inter-ethnic contact influences an individual's ethnic identity. The students in the study were from two French language universities in unilingual French milieux, one French language university in a bilingual milieu, and one English language university in the same bilingual milieu. Results indicated a negative relationship between fear of assimilation and self-ratings of fluency in the second language. Furthermore, Taylor et al (1977) report that

this fear of assimilation (i.e. threat to ethnic identity) tends to decrease with personal contact with Anglophones. According to these authors, increased contact with the other group provides the experience necessary to make its members less threatening.

The group of Anglophones in Quebec will now be discussed. Due to the small sample of students, results for this group must be interpreted with caution. The sample size could account for the insignificant correlation found between motivation and competence, and it is therefore suggested that further studies in a French linguistic milieu should be undertaken to confirm the results obtained here.

On looking at the results found, however, it is apparent that for this sample the Integrative and Instrumental factors are more precisely defined than those found in previous research. For the Instrumental orientation, a distinction is made between School-Instrumental and Career-Instrumental. The Integrative-Prestige orientation differs from the traditional Integrative orientation in that although it does have the necessary affective and identification aspects, it also includes wanting to learn French in order to become an influential person.

A striking fact about this group is that although they want to integrate into the Francophone community and become influential members (Integrative-Prestige factor), they are also interested in French for Self-Actualization and

Sociability reasons. Furthermore, these orientations are the best predictors of motivation. This is contrary to what was hypothesized in the introduction, where it was supposed that Anglophone students in Quebec might learn French as a second language for anti-Integrative or Instrumental reasons. The new orientations can be explained by referring to the effects of inter-ethnic contact.

Due to the concentration of Francophones in Quebec, Anglophones in the area experience a great amount of contact with Francophones. Judging by the orientations of Anglophone students, this experience appears to be a positive one in that it encourages learning French, and does not appear to foster the defensive reaction evidenced by the no-contact London group. It will be recalled that Taylor et al (1977) found that contact with the second language group makes its members less threatening and encourages second language learning. Unfortunately, Taylor's findings must be applied with caution. The difficulty lies in the fact that Anglophones in Quebec are not a linguistic majority in the province, as were the Francophones in Taylor's study.

Since this group of Anglophones is a linguistic minority, one might also expect them to be a group with weak 'ethnolinguistic vitality'. According to Giles (1977) such a group could possibly become assimilated into a language group with more 'ethnolinguistic vitality'. According to the results in this study, where students are learning French for Integrative-

Prestige, Self-Actualization and Sociability reasons, they do not feel threatened by the milieu. Rather, it appears that they perceive themselves as having strong 'ethnolinguistic vitality' and they want to be influential in the community, although they are a minority in the province. They appear comfortable with the inter-group relationship, and are interested in French more for the language itself (i.e. they give such reasons as learning French to become a more knowledgeable person).

An unexpected aspect of the present results is the fact that the best predictors of motivation do not appear to be the best predictors of competence. This has practical implications for both the design and implementation of curricula. Although a student's level of motivation might be upheld by certain aspects, these aspects appear to have little relationship with the aims of second language learning programmes as reflected in the context of exams. Although students in London might work hard for Integrative reasons, they are not the ones to achieve highest competence in French.

Similarly, Quebec students motivated by Integrative-Prestige, Self-Actualization, and Sociability reasons are not the ones to become most competent in French. In fact, there is a negative correlation between the need for sociability and competence, indicating that these students, although motivated to learn French, are poor achievers. Since the most competent students are those learning it for Instrumental reasons, these reasons appear to be valued in the milieu.

The obvious conclusion (assuming that final marks reflect a knowledge of course content) is that course content does not favour students who are motivated to learn French for Integrative, Integrative-Prestige, Self-Actualization, and Sociability reasons but instead favours students interested in completing their course for Influence (the London Group), and Instrumental (the Quebec group) reasons. With this realization, it should be possible to evaluate and then re-organize second language learning programmes. By taking into consideration an individual's orientations to learning a second language, a programme tailored to his specific goals and interests could be developed, thereby helping the motivated individuals who are not at present achieving competence.

CONCLUSION

In conclusion, it would appear that the previous belief that integrativeness is the keystone to motivation and achievement in a second language must be questioned. It is evident from the present results that many new orientations are operational and that individuals from different linguistic milieux are motivated to learn French for different reasons.

It has also become apparent that the discrepancies in the orientations which were found to characterize different milieux seem best interpreted with reference to the conjunction of no-contact - contact dimensions, whereby in London communicating

with the minority group of Francophones is a mean of influencing them and, in Quebec, contact with another dominant group promotes an interest in the language for intellectual reasons.

Although these results support the importance given to the concept of 'ethnolinguistic vitality' in previous theorizing (Giles et al, 1977), it appears that the effects of 'ethnolinguistic vitality' can only be understood with reference to the amount of contact in the community with the second language group.

Finally, the results support the utility of the concept of orientation as a descriptive and analytic tool of motivation in second language learning. From a practical viewpoint, knowing these orientations permits the identification of the goals aimed at by the different groups, and the tailoring of curricula to their specific needs. However, since the existence and potency of particular orientations are intimately linked to social factors pertaining to the immediate milieu, (e.g. integrativeness is not found to be a universally potent orientation) any investigation of orientations should include a thorough assessment of its contextual relevance.

The recent controversy arising over the importance of instrumental and integrative orientations (see Oller, 1978; Gardner, 1979b) could, indeed, be due to the unsupported assumption of the universality of these constructs.

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APPENDIX A

Questionnaire Administered
To the Subjects.

This investigation is designed to study some of the reasons people give for studying a second language. Your answers to any or all questions will be treated with the strictest confidence. Although we ask for your name on the cover page, we do so only because we must be able to associate your answers to this questionnaire with other information we will collect later. It is important for you to know, however, that before the questionnaires are examined, your questionnaire will be numbered, the same number will be put on the section containing your name, and then that section will be removed. By following a similar procedure with the other information we will be able to match the questionnaires through matching numbers and avoid having to associate your name directly with the questionnaire.

For the results of this survey to be meaningful, it is important that you be as accurate and as frank as possible in your answers. If you do not want to answer any particular item, or for that matter the entire questionnaire you do not have to. However, you should realize that the usefulness of your questionnaire will be lessened to the extent that you do not answer each item. We, therefore, urge you to answer all items unless it is important to you personally to omit certain ones. If you have difficulties or questions about any of the items, please raise your hand and someone will come to your assistance.

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School of Psychology
University of Ottawa, 1978

THIS SECTION WILL BE REMOVED IMMEDIATELY AFTER THE QUESTIONNAIRE
IS CODED

PLEASE PRINT

NAME _____
Last Name First Name Initial

SCHOOL _____ GRADE _____ CITY _____

BIRTHDATE _____ SEX FEMALE _____ MALE _____
Day Month Year

Following are a number of statements with which some people agree and others disagree. There are no right or wrong answers since many people have different opinions. Please rate how much you personally agree or disagree with these statements using the scale below:

- | | |
|------------------------|----------------------|
| -3 strongly disagree | + 3 strongly agree |
| -2 moderately disagree | + 2 moderately agree |
| -1 slightly disagree | + 1 slightly agree |

For each statement, write in the left margin the number corresponding to the amount of your agreement or disagreement. Note, there is no right or wrong answer. All that is important is that you indicate your personal feeling.

- 1 _____ Studying French can be important for me because it will allow me to be more at ease with fellow Canadians who speak French.
- 2 _____ Some of our best citizens are of French Canadian descent.
- 3 _____ Studying French can be important for me because it will help me to find out how people live in French speaking areas.
- 4 _____ Studying French can be important for me because I may need it to be admitted to a higher school.
- 5 _____ Speaking French does not make me question my own capacity to remain an anglophone.
6. _____ Studying French can be important for me because I think it will someday be useful in getting a good job.
7. _____ Studying French can be important for me because I would like to go to Quebec.
8. _____ Studying French can be important for me because I'll need it for my future career.
9. _____ I would like to know more French Canadians.
10. _____ Studying French can be important for me because I want to become a member of the French Canadian community.

11. _____ Studying French can be important for me because it will help me if I need to study another language later on.
12. _____ Studying French can be important for me because it will help me to understand French Canadians and their way of life.
13. _____ I do not lose my English cultural heritage when I speak French.
14. _____ Studying French can be important for me because I would like to go to France.
15. _____ If Canada should lose the French culture of Quebec, it would indeed be a great loss.
16. _____ Studying French can be important for me because it will make me a more knowledgeable person.
17. _____ Studying French can be important for me because I would like to meet some French people.
18. _____ The more I learn French, the less I am sure of the cultural group to which I belong.
19. _____ Studying French can be important for me because it will help me to appreciate the problems that French people have in a predominantly English-speaking country.
20. _____ Studying French can be important for me because I'll need it someday to get a degree.
21. _____ French Canadians add a distinctive flavor to the Canadian culture.
22. _____ Studying French can be important for me because it will help me understand my own language better.
23. _____ Studying French can be important for me because I would like to make friends with some French people.
24. _____ Learning French does not make me question my own cultural identity.
25. _____ Studying French can be important for me because it will make me appear more cultured.
26. _____ Studying French can be important for me because it will help me to be successful in business.

27. _____ English Canadians should make a greater effort to learn the French language.
28. _____ Studying French can be important to me because it will be useful to me after I leave school.
29. _____ Studying French can be important to me because I feel that no one is really educated unless he is fluent in the French language.
30. _____ Most French Canadians are so friendly and easy to get along with that Canada is fortunate to have them.
31. _____ Studying French can be important for me because it will help me if I should ever travel.
32. _____ Studying French can be important for me because I would like to get a job where I could use my French.
33. _____ When I speak French, I have the impression that I am losing my cultural identity.
34. _____ Studying French can be important for me because it will enable me to gain good friends more easily among French-speaking Canadians.
35. _____ Studying French can be important for me because other people will respect me more if I have a knowledge of another language.
36. _____ French Canadians have preserved much of the beauty of old Canadian folkways.
37. _____ Studying French can be important for me because it will help me get to know French speaking people.
38. _____ Studying French can be important for me because it will permit me to become an influential member of my community.
39. _____ I feel ill at ease when I speak French because I have the impression of becoming assimilated into the French culture.
40. _____ Studying French can be important for me because I will be able to participate more freely in the activities of other cultural groups.

41. _____ Studying French can be important for me because it will help me acquire new ideas and broaden my outlook.
42. _____ The French Canadian heritage is an important part of our Canadian identity.
43. _____ Studying French can be important for me because I need it in order to finish high school.
44. _____ Studying French can be important for me because it will help me to get a better paying job.
45. _____ Studying French can be important for me because it will help me to learn about myself.
46. _____ Studying French can be important for me because it will allow me to gain influence over French Canadians.
47. _____ French Canadians are very sociable, warm-hearted and creative people.
48. _____ Studying French can be important for me because it will allow me to meet and converse with more and varied people.
49. _____ Studying French can be important for me because it will help me if I ever enter politics.
50. _____ Learning French does not make me question my belonging to the English group.
51. _____ Studying French can be important for me because it will enable me to think and behave like French Canadians.
52. _____ Studying French can be important for me because I would like to travel to a French speaking area.
53. _____ The more I get to know French Canadians, the more I want to be fluent in their language.
54. _____ Studying French can be important for me because it will enable me to better understand and appreciate French Canadian art and literature.
55. _____ Learning French estranges me from my own culture.

Please answer each of the following items by circling the letter of the alternative which appears to be most applicable to you. We should like to remind you that no individual teacher will have access to the questionnaires or any other information which associates your responses to this questionnaire with your name. We would urge you to be as accurate as possible since the success of this investigation depends upon it.

1. If I had the opportunity to speak French outside of school, I would:
 - a. speak French most of the time, using English only if really necessary.
 - b. speak it occasionally, using English whenever possible.
 - c. never speak it.

2. During French Class, I would like:
 - a. to have as much English as possible spoken.
 - b. to have a combination of French and English spoken.
 - c. to have only French spoken.

3. I actively think about what I have learned in my French Class:
 - a. once in awhile.
 - b. hardly ever.
 - c. very frequently.

4. If there were a French Club in my school, I would:
 - a. be most interested in joining.
 - b. attend meetings once in awhile.
 - c. definitely not join.

5. If French were not taught in school, I would:
 - a. try to obtain lessons in French somewhere else.
 - b. not bother learning French at all.
 - c. pick up French in everyday situations (i.e., read French books and newspapers, try to speak it whenever possible, etc...).

6. When I am in French class, I:
 - a. never say anything.
 - b. answer only the easier questions.
 - c. volunteer answers as much as possible.

7. If I had the opportunity and knew enough French, I would read French magazines and newspapers:
 - a. not very often.
 - b. as often as I could.
 - c. never.

8. If there were a local French T.V. station, I would:
 - a. turn it on occasionally.
 - b. never watch it.
 - c. try to watch it often.

9. Compared to my other courses, I like French:
 - a. the same as all the others.
 - b. the most.
 - c. least of all.

10. When I hear a French song on the radio, I:
 - a. change the station.
 - b. listen to the music, paying attention only to the easy words.
 - c. listen carefully and try to understand all the words.

11. If it were up to me whether or not to take French, I:
 - a. would drop it.
 - b. don't know whether I would take it or not.
 - c. would definitely take it.

12. When I have a problem understanding something we are learning in French class, I:
- just forget about it.
 - immediately ask the teacher for help.
 - only seek help just before the exam.
13. If there were French-speaking families in my neighbourhood, I would:
- speak French with them sometimes.
 - speak French with them as much as possible.
 - never speak French with them.
14. When it comes to French homework, I:
- just skim over it.
 - put some effort into it, but not as much as I could.
 - work very carefully, making sure I understand everything.
15. If I had the opportunity to see a French play, I would:
- definitely go.
 - go only if I had nothing else to do.
 - not go.
16. Considering how I study French, I can honestly say that I:
- really try to learn French.
 - will pass on the basis of sheer luck or intelligence because I do very little work.
 - do just enough work to get along.
17. If the opportunity arose and I knew enough French, I would watch French T.V. programmes:
- never.
 - sometimes.
 - as often as possible.

18. After I get my French assignments back, I:
- just throw them in my desk and forget them.
 - look them over, but don't bother correcting mistakes.
 - always rewrite them, correcting my mistakes.
19. I find studying French:
- no more interesting than most subjects.
 - not interesting at all.
 - very interesting.
20. If my teacher wanted someone to do an extra French assignment, I would:
- definitely volunteer.
 - only do it if the teacher asked me directly.
 - definitely not volunteer.
21. For how many years, including this year, have you taken French?
_____ years
22. If you had the choice, how likely or probable is it that you would take French next year? (check one).
- extremely _____ extremely
improbable _____ probable
or likely _____ or likely
23. During the past year how much opportunity have you had to speak French outside of the school situation?
None at all _____ A great amount
24. I write French:
- _____
Not at all A little Fairly Well Very Well

25. I understand French:

<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Not at all	A little		Fairly Well	Very Well

26. I read French

<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Not at all	A little		Fairly Well	Very Well

27. I speak French:

<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Not at all	A little		Fairly Well	Very Well

APPENDIX B

Correlation Matrices Obtained
From the 36 Orientation Items

CORRELATION COEFFICIENTS..

VAR01	VAR02	VAR03	VAR04	VAR05	VAR06	VAR07	VAR08	VAR09	VAR10
1.00000	0.34456	0.08284	0.23968	0.26571	0.27904	0.20655	0.30440	0.3311	0.33644
0.34456	1.00000	0.13318	0.18555	0.11356	0.29904	0.40075	0.60404	0.28528	0.25528
0.08284	0.13318	1.00000	0.28509	0.20725	0.42494	0.23492	0.04249	0.17311	0.26146
0.23968	0.18555	0.28509	1.00000	0.37166	0.24094	0.10452	0.08537	0.27689	0.32523
0.26571	0.11356	0.20725	0.37166	1.00000	0.33200	0.18445	0.18071	0.33419	0.31070
0.11356	0.20725	0.37166	0.24094	0.33200	1.00000	0.37241	0.28650	0.33244	0.36624
0.20725	0.37166	0.24094	0.28650	0.33200	0.37241	1.00000	0.30816	0.30816	0.24457
0.24094	0.28650	0.33200	0.10452	0.18445	0.28650	0.30816	1.00000	0.24457	0.44204
0.28650	0.30816	0.33200	0.08537	0.33419	0.33200	0.30816	0.24457	1.00000	1.00000
0.33419	0.30816	0.33200	0.33200	0.37470	0.33200	0.36624	0.37470	0.24457	0.55595
0.36624	0.40291	0.12777	0.26546	0.26161	0.46650	0.27421	0.37470	0.24457	0.06982
0.40291	0.38353	0.06513	0.09334	0.26161	0.10237	0.14075	0.37470	0.24457	0.28123
0.38353	0.13075	0.51273	0.54841	0.54531	0.21706	0.28735	0.37470	0.24457	0.06982
0.13075	0.24179	0.17291	0.11619	0.13708	0.36562	0.37330	0.28735	0.24457	0.50931
0.24179	0.30803	0.12650	0.16143	0.10715	0.35462	0.30556	0.37330	0.24457	0.54932
0.30803	0.31376	0.11950	0.16199	0.10715	0.40781	0.37462	0.37330	0.24457	0.56322
0.31376	0.26776	0.09287	0.54890	0.47277	0.28485	0.15445	0.18161	0.44087	0.44087
0.26776	0.22609	0.19084	0.53903	0.46199	0.53399	0.30135	0.18161	0.44087	0.44087
0.22609	0.12142	0.11115	0.12476	0.24978	0.33399	0.26052	0.18161	0.44087	0.44087
0.12142	0.19907	0.16256	0.21078	0.28586	0.51728	0.30158	0.21078	0.44087	0.44087
0.19907	0.23300	0.11703	0.52568	0.57739	0.51728	0.22152	0.21078	0.44087	0.44087
0.23300	0.31601	0.15088	0.06363	0.08729	0.51728	0.31677	0.21078	0.44087	0.44087
0.31601	0.15712	0.08087	0.01704	0.14965	0.25595	0.22771	0.21078	0.44087	0.44087
0.15712	0.52773	0.09355	0.17368	0.15410	0.25595	0.38934	0.21078	0.44087	0.44087
0.52773	0.21849	0.00988	0.22001	0.23928	0.29333	0.15204	0.21078	0.44087	0.44087
0.21849	0.29507	0.15456	0.34095	0.31163	0.33333	0.26330	0.21078	0.44087	0.44087
0.29507	0.36880	0.19763	0.31789	0.30316	0.32817	0.28330	0.21078	0.44087	0.44087
0.36880	0.08573	0.46058	0.14461	0.20794	0.32817	0.19461	0.21078	0.44087	0.44087
0.08573	0.11115	0.24289	0.51325	0.24725	0.16825	0.19461	0.21078	0.44087	0.44087
0.11115	0.43378	0.09463	0.17676	0.20108	0.46219	0.23299	0.21078	0.44087	0.44087
0.43378	0.12468	0.08429	0.11231	0.00709	0.46219	0.23299	0.21078	0.44087	0.44087
0.12468	0.31768	0.13354	0.31618	0.36230	0.35011	0.30180	0.21078	0.44087	0.44087
0.31768	0.05619	0.00335	0.01799	0.10228	0.10221	0.10221	0.21078	0.44087	0.44087
0.05619	0.29011	0.02415	0.05604	0.03711	0.10221	0.10221	0.21078	0.44087	0.44087
0.29011	0.24341	0.12967	0.39414	0.41913	0.40984	0.31187	0.21078	0.44087	0.44087
0.24341	0.38364	0.11627	0.11045	0.09882	0.40984	0.31187	0.21078	0.44087	0.44087
0.38364					0.25523	0.30377	0.21078	0.44087	0.44087

LONDON SAMPLE

FILE NONAME (CREATION DATE = 03/19/79)

	VARI1	VARI2	VARI3	VARI4	VARI5	VARI6	VARI7	VARI8	VARI9	VARI0
VAR01	0.43655	0.16089	0.15459	0.29759	0.43636	0.31807	0.28327	0.46256	0.24927	0.36843
VAR02	0.40291	0.38353	0.13075	0.24179	0.30803	0.31376	0.26776	0.22609	0.21242	0.19907
VAR03	0.12777	0.08513	0.51273	0.17291	0.12650	0.11990	0.05787	0.15084	0.11115	0.16256
VAR04	0.26846	0.09334	0.34841	0.11619	0.17143	0.16199	0.54890	0.53903	0.21078	0.21078
VAR05	0.26171	0.06719	0.21706	0.13788	0.17815	0.30714	0.47277	0.51199	0.24978	0.24978
VAR06	0.46650	0.10237	0.21706	0.36562	0.39462	0.46781	0.28482	0.35966	0.33399	0.18519
VAR07	0.27421	0.14975	0.28739	0.37300	0.30569	0.37468	0.15545	0.33505	0.30942	0.30158
VAR08	0.39748	0.34328	-0.01822	0.27035	0.32022	0.34565	0.11861	0.18192	0.25735	0.23598
VAR09	0.56059	0.04337	0.22246	0.33541	0.41333	0.41641	0.38016	0.36856	0.19048	0.49546
VAR10	0.55595	0.06982	0.28123	0.50931	0.64920	0.55322	0.40087	0.46431	0.14573	0.31827
VAR11	1.00000	0.22851	0.21670	0.37755	0.78970	0.46785	0.26264	0.35595	0.15641	0.17061
VAR12	0.22851	1.00000	0.07470	0.20673	0.17329	0.15595	0.07748	0.19300	0.22837	0.12414
VAR13	0.07470	0.07470	1.00000	0.16122	0.09713	0.26553	0.47166	0.43003	0.16440	0.33295
VAR14	0.37755	0.20673	0.16122	1.00000	0.38158	0.36087	0.23811	0.28245	0.17359	0.22773
VAR15	0.78970	0.17329	0.09713	0.38158	1.00000	0.39275	0.26013	0.29882	0.17359	0.26282
VAR16	0.46785	0.15595	0.26553	0.36087	0.39275	1.00000	0.45985	0.32965	0.26400	0.35537
VAR17	0.26264	0.07748	0.47166	0.23811	0.26013	0.45985	1.00000	0.49179	0.25956	0.35537
VAR18	0.35595	0.19300	0.43003	0.28245	0.26013	0.45985	0.49179	1.00000	0.30357	0.32221
VAR19	0.16091	0.15642	0.22837	0.16440	0.17359	0.32965	0.49179	0.30357	1.00000	0.20280
VAR20	0.28706	0.17051	0.12414	0.33295	0.28773	0.26282	0.26995	0.30397	0.20280	1.00000
VAR21	0.39011	0.12279	0.37281	0.32454	0.30160	0.37565	0.50691	0.36221	0.20280	0.31813
VAR22	0.39695	0.24545	0.04855	0.37477	0.49906	0.27848	0.15514	0.24906	0.14027	0.29154
VAR23	0.2942	0.08836	0.12941	0.28739	0.30643	0.35827	0.27340	0.25125	0.28584	0.14488
VAR24	0.51011	0.38878	0.12501	0.41102	0.48762	0.43651	0.18732	0.34421	0.18391	0.25165
VAR25	0.31404	0.22043	0.19423	0.20469	0.31995	0.36080	0.38092	0.29904	0.32596	0.18010
VAR26	0.51544	0.20924	0.12257	0.30711	0.47084	0.43459	0.47064	0.41733	0.19950	0.33571
VAR27	0.47891	0.35771	0.19641	0.43360	0.39057	0.44714	0.36119	0.44074	0.33695	0.41417
VAR28	-0.02330	0.12286	0.49095	0.21906	-0.01928	0.16475	0.20813	0.14481	0.11633	0.16678
VAR29	0.19878	0.04703	0.60563	0.17124	0.16144	0.20598	0.62447	0.48321	0.20602	0.23151
VAR30	0.31670	0.36289	0.18120	0.29750	0.24599	0.31846	0.25350	0.27694	0.26630	0.19539
VAR31	-0.11456	0.00927	0.00026	0.00054	-0.15683	0.22127	0.10721	0.04471	0.07456	-0.01337
VAR32	0.64291	0.28673	0.24764	0.41842	0.58641	0.50897	0.32604	0.45673	0.27447	0.46168
VAR33	0.07521	0.12484	0.04290	0.16355	0.19024	0.50897	0.16937	0.14198	0.04439	0.09380
VAR34	0.20420	0.21725	-0.01603	0.18373	0.21191	0.25020	0.03897	0.04191	0.26430	0.08041
VAR35	0.56651	0.03136	0.31228	0.30608	0.48125	0.44668	0.35271	0.45494	0.28024	0.39794
VAR36	0.22821	0.27530	0.14673	0.21431	0.29703	0.27367	0.19698	0.11518	0.21367	0.30364

	VAR21	VAR22	VAR23	VAR24	VAR25	VAR26	VAR27	VAR28	VAR29	VAR30
VAR01	0.25985	0.40589	0.16298	0.42345	0.31272	0.44248	0.44411	0.62244	0.25151	0.36829
VAR02	0.23300	0.31601	0.15712	0.52774	0.29146	0.29087	0.49410	0.62244	0.25151	0.43378
VAR03	0.11703	0.15088	0.08087	0.00885	0.20988	0.15464	0.10762	0.62244	0.25151	0.05993
VAR04	0.52568	0.03636	0.01704	0.17368	0.22200	0.34098	0.10762	0.62244	0.25151	0.17049
VAR05	0.57739	0.08739	0.14965	0.15410	0.23324	0.31407	0.30715	0.62244	0.25151	0.20108
VAR06	0.51728	0.24559	0.25545	0.34457	0.29348	0.31007	0.36317	0.62244	0.25151	0.46219
VAR07	0.22155	0.34163	0.12284	0.38934	0.29348	0.29348	0.29348	0.62244	0.25151	0.46219
VAR08	0.14278	0.33042	0.12284	0.19758	0.11240	0.29348	0.29348	0.62244	0.25151	0.27887
VAR09	0.47667	0.30030	0.19595	0.37913	0.24712	0.24712	0.24712	0.62244	0.25151	0.21817
VAR10	0.40542	0.34848	0.24374	0.46020	0.25417	0.25417	0.25417	0.62244	0.25151	0.22859
VAR11	0.39011	0.39595	0.24942	0.51011	0.24942	0.24942	0.24942	0.62244	0.25151	0.31657
VAR12	0.12279	0.24545	0.08036	0.38878	0.22093	0.22093	0.22093	0.62244	0.25151	0.36289
VAR13	0.37281	0.04855	0.12941	0.12501	0.19423	0.20524	0.35771	0.62244	0.25151	0.04703
VAR14	0.32454	0.03777	0.12941	0.41102	0.20469	0.12257	0.19841	0.62244	0.25151	0.60563
VAR15	0.30160	0.49506	0.20643	0.48765	0.30711	0.30711	0.33600	0.62244	0.25151	0.29750
VAR16	0.37569	0.27848	0.35627	0.47651	0.31005	0.42454	0.3057	0.62244	0.25151	0.24956
VAR17	0.50691	0.15514	0.23740	0.18722	0.38002	0.47054	0.36115	0.62244	0.25151	0.25356
VAR18	0.54454	0.24506	0.23740	0.14421	0.38002	0.47054	0.36115	0.62244	0.25151	0.27994
VAR19	0.31813	0.14027	0.28584	0.14351	0.12306	0.19350	0.36094	0.62244	0.25151	0.27630
VAR20	0.28790	0.20154	0.24488	0.25145	0.18010	0.33571	0.36094	0.62244	0.25151	0.19339
VAR21	1.00000	1.00000	0.14158	0.43774	0.10908	0.34270	0.42437	0.62244	0.25151	0.34998
VAR22	1.00000	1.00000	0.43774	0.55942	0.33111	0.42655	0.42437	0.62244	0.25151	0.34998
VAR23	0.12758	0.00000	1.00000	0.33772	0.33111	0.42655	0.42437	0.62244	0.25151	0.25906
VAR24	0.34774	0.55942	0.33772	1.00000	0.40739	0.43136	0.42437	0.62244	0.25151	0.25151
VAR25	0.40968	0.29111	0.38491	0.40739	0.40739	0.43136	0.42437	0.62244	0.25151	0.43136
VAR26	0.34270	0.29111	0.28684	0.45136	0.40739	0.43136	0.42437	0.62244	0.25151	0.30374
VAR27	0.42437	0.37505	0.33479	0.54266	0.42437	0.46096	0.44812	0.62244	0.25151	0.34462
VAR28	0.19537	0.11100	0.21897	0.15105	0.49312	0.46096	1.00000	0.62244	0.25151	0.44443
VAR29	0.50370	0.08475	0.15933	0.07764	0.34334	0.34334	0.21378	0.62244	0.25151	0.34698
VAR30	0.34259	0.28906	0.23518	0.12862	0.42508	0.38177	0.22391	0.62244	0.25151	0.28906
VAR31	0.42592	0.08592	0.13728	0.42592	0.30374	0.36462	0.44443	0.62244	0.25151	0.28906
VAR32	0.46260	0.34717	0.13728	0.54757	0.31195	0.35658	0.44443	0.62244	0.25151	1.00000
VAR33	0.11805	0.21805	0.32048	0.54757	0.31195	0.35658	0.44443	0.62244	0.25151	0.31805
VAR34	0.17010	0.21805	0.32048	0.18426	0.17122	0.15142	0.15472	0.62244	0.25151	0.22727
VAR35	0.51295	0.12539	0.26229	0.26229	0.22396	0.18490	0.26524	0.62244	0.25151	0.12539
VAR36	0.11710	0.28773	0.11770	0.39765	0.22885	0.44214	0.45806	0.62244	0.25151	0.11710

ANALYSE FACTORIELLE ORIENTATIONS LONDON ANGL APP FRAN.

03/19/79

PAGE 8

FILE NUNAME (CREATION DATE = 03/19/79)

	VAR31	VAR32	VAR33	VAR34	VAR35	VAR36
VAR01	0.14445	0.59455	0.08252	0.27778	0.31550	0.34301
VAR02	0.12568	0.31758	0.05619	0.29011	0.24341	0.38364
VAR03	-0.08429	0.11354	0.00235	0.02415	0.12067	0.15627
VAR04	0.11231	0.32618	0.01759	-0.05609	0.39416	0.10454
VAR05	0.00709	0.36230	0.10228	0.03711	0.41913	0.05882
VAR06	0.06705	0.35911	0.10621	0.33615	0.40898	0.22882
VAR07	0.02380	0.39013	0.14022	0.13794	0.31187	0.30347
VAR08	0.15368	0.34205	0.10913	0.34772	0.21407	0.32714
VAR09	-0.01090	0.49127	0.09523	0.12034	0.61777	0.14150
VAR10	-0.05210	0.60733	0.14208	0.12568	0.44529	0.18356
VAR11	-0.11456	0.44291	0.07521	0.20420	0.56651	0.22821
VAR12	-0.00927	0.28873	0.12484	0.21725	0.03134	0.27530
VAR13	0.00026	0.24784	0.04290	-0.12228	0.31228	0.14673
VAR14	0.00054	0.41842	0.16395	0.18373	0.30608	0.21473
VAR15	-0.13683	0.58641	0.19024	0.21191	0.48125	0.12673
VAR16	0.22127	0.50897	0.26395	0.25020	0.44668	0.23737
VAR17	0.10721	0.32606	0.16937	0.03397	0.35271	0.11988
VAR18	-0.04471	0.45673	0.14198	0.04191	0.35494	0.11519
VAR19	0.07456	0.27447	0.00439	0.26430	0.31357	0.31357
VAR20	-0.01337	0.45168	0.05380	0.08041	0.29764	0.30364
VAR21	0.02659	0.49500	0.07110	0.13011	0.21295	0.11715
VAR22	0.08592	0.44217	0.21805	0.11683	0.21985	0.29773
VAR23	0.13726	0.26049	0.33004	0.12440	0.14722	0.17705
VAR24	0.03557	0.54703	0.18826	0.26229	0.44222	0.23285
VAR25	0.31195	0.36564	0.17132	0.23596	0.22071	0.24725
VAR26	0.15698	0.56983	0.15162	0.18490	0.42214	0.25327
VAR27	0.05720	0.61628	0.15470	0.26224	0.45810	0.25327
VAR28	0.14203	0.10139	0.08295	0.18801	0.14020	0.25327
VAR29	0.07111	0.28527	0.08295	0.01259	0.28558	0.09300
VAR30	0.31965	0.42212	-0.02727	0.44415	0.28558	0.47624
VAR31	1.00000	0.03750	-0.02727	0.16145	0.26077	0.47624
VAR32	0.03750	1.00000	0.22333	0.21014	0.21014	0.04817
VAR33	0.18356	0.22223	1.00000	-0.07250	0.37217	0.37150
VAR34	0.16145	0.21914	-0.07250	1.00000	0.19125	0.04139
VAR35	-0.01847	0.57217	0.14800	0.19125	0.00000	0.34036
VAR36	0.04617	0.37160	0.04139	0.34036	0.18830	1.00000

DETERMINANT OF CORRELATION MATRIX = 0.000000 (0.528521670-02)

FILE NONAME (CREATION DATE = 05/03/79)

CORRELATION COEFFICIENTS..

	VAR01	VAR02	VAR03	VAR04	VAR05	VAR06	VAR07	VAR08	VAR09	VAR10
VAR01	1.00000	0.19005	0.10440	-0.31007	-0.19283	0.23842	0.38195	-0.02042	0.21046	0.17103
VAR02	0.19005	1.00000	-0.09960	0.05192	0.18190	0.54036	0.06909	0.14410	-0.08492	0.35838
VAR03	0.10440	-0.09960	1.00000	0.19007	0.18190	0.09037	0.06909	0.14410	0.40224	0.13347
VAR04	-0.31007	0.05192	0.19007	1.00000	0.19007	0.09037	0.06909	0.14410	0.00081	0.20742
VAR05	-0.19283	0.18190	0.18190	0.19007	1.00000	0.09037	0.06909	0.14410	0.00081	0.10907
VAR06	0.23842	0.54036	0.09037	0.09037	0.09037	1.00000	0.13342	0.41475	0.08108	0.27276
VAR07	0.38195	0.06909	0.06909	0.06909	0.06909	0.13342	1.00000	0.09641	0.32008	0.50059
VAR08	-0.02042	0.14410	0.14410	0.14410	0.14410	0.41475	0.09641	1.00000	0.09641	0.42044
VAR09	0.21046	0.40224	0.40224	0.40224	0.40224	0.08108	0.32008	1.00000	1.00000	0.37758
VAR10	0.17103	0.13347	0.13347	0.13347	0.13347	0.27276	0.50059	0.37758	0.37758	1.00000
VAR11	0.00000	0.20653	0.20653	0.20653	0.20653	0.22271	0.20653	0.28950	0.28950	0.11900
VAR12	0.00000	0.22271	0.22271	0.22271	0.22271	0.16327	0.09876	0.27991	0.27991	0.05444
VAR13	0.00000	0.12095	0.12095	0.12095	0.12095	0.12095	0.35573	0.14556	0.14556	0.23038
VAR14	0.00000	0.29983	0.29983	0.29983	0.29983	0.29983	0.25226	0.20641	0.20641	0.32729
VAR15	0.00000	0.33487	0.33487	0.33487	0.33487	0.33487	0.29260	0.30946	0.30946	0.24865
VAR16	0.00000	0.10187	0.10187	0.10187	0.10187	0.10187	0.33748	0.23246	0.23246	0.38915
VAR17	0.00000	0.22059	0.22059	0.22059	0.22059	0.22059	0.14448	0.25422	0.25422	0.23410
VAR18	0.00000	0.25777	0.25777	0.25777	0.25777	0.25777	0.03467	0.30028	0.30028	0.20057
VAR19	0.00000	0.32466	0.32466	0.32466	0.32466	0.32466	0.05538	0.11046	0.11046	0.03528
VAR20	0.00000	0.06487	0.06487	0.06487	0.06487	0.06487	0.08388	0.24927	0.24927	0.17326
VAR21	0.00000	0.34341	0.34341	0.34341	0.34341	0.34341	0.15336	0.26720	0.26720	0.25866
VAR22	0.00000	0.25494	0.25494	0.25494	0.25494	0.25494	0.28990	0.28647	0.28647	0.23292
VAR23	0.00000	0.36705	0.36705	0.36705	0.36705	0.36705	0.09741	0.24793	0.24793	0.10486
VAR24	0.00000	0.28919	0.28919	0.28919	0.28919	0.28919	0.07185	0.36819	0.36819	0.18513
VAR25	0.00000	0.51920	0.51920	0.51920	0.51920	0.51920	0.13662	0.10797	0.10797	0.21503
VAR26	0.00000	0.54387	0.54387	0.54387	0.54387	0.54387	0.12639	0.25282	0.25282	0.26882
VAR27	0.00000	0.46068	0.46068	0.46068	0.46068	0.46068	0.37982	0.53810	0.53810	0.42552
VAR28	0.00000	0.09116	0.09116	0.09116	0.09116	0.09116	0.00463	0.13503	0.13503	0.22841
VAR29	0.00000	0.34379	0.34379	0.34379	0.34379	0.34379	0.08512	0.04136	0.04136	0.03444
VAR30	0.00000	0.21011	0.21011	0.21011	0.21011	0.21011	0.18592	0.21648	0.21648	0.14034
VAR31	0.00000	0.22821	0.22821	0.22821	0.22821	0.22821	0.31157	0.35573	0.35573	0.50736
VAR32	0.00000	0.16596	0.16596	0.16596	0.16596	0.16596	0.11195	0.38983	0.38983	0.14940
VAR33	0.00000	0.30245	0.30245	0.30245	0.30245	0.30245	0.06682	0.22314	0.22314	0.09958
VAR34	0.00000	0.58344	0.58344	0.58344	0.58344	0.58344	0.34374	0.13436	0.13436	0.20229
VAR35	0.00000	0.26879	0.26879	0.26879	0.26879	0.26879	0.02992	0.50165	0.50165	0.07663
VAR36	0.00000	0.16243	0.16243	0.16243	0.16243	0.16243	0.38935	0.12427	0.12427	0.15683

QUEBEC SAMPLE

ANALYSE FACTORIELLE ORIENTATIONS QU'REC ANGL APP FRAN

FILE: MNAME (CREATION DATE = 05/03/79)

	VAR11	VAR12	VAR13	VAR14	VAR15	VAR16	VAR17	VAR18	VAR19	VAR20
VAR01	0.28366	0.09465	-0.31067	0.17268	0.10940	0.13910	0.12793	-0.02723	0.08473	-0.02257
VAR02	0.20000	0.04007	0.05223	-0.01619	0.24223	0.16023	0.06926	-0.04405	0.24193	0.13740
VAR03	0.13893	0.08023	0.31283	0.10349	0.11026	0.32867	-0.08706	0.34291	-0.01039	0.21590
VAR04	0.16644	0.07645	0.33003	0.26492	0.01264	0.17384	0.35648	0.45156	-0.14916	-0.06128
VAR05	0.27160	0.17874	0.42009	0.40841	0.12595	0.18713	0.40564	0.61339	0.03266	0.08487
VAR06	0.22271	0.16557	0.12095	0.29883	0.33487	0.10187	0.22059	0.25377	0.32466	-0.08498
VAR07	0.20623	0.20876	0.35471	0.24760	0.24760	0.31748	0.14418	0.33054	-0.01948	0.20497
VAR08	0.26298	0.26298	0.25553	0.20241	0.20242	0.28416	0.23821	0.39054	-0.01046	0.28022
VAR09	0.28960	0.27991	0.23536	0.32166	0.30945	0.23246	0.25452	0.48871	-0.03528	0.37326
VAR10	0.11900	0.05444	-0.23938	0.32729	0.24805	0.38915	0.23410	0.20037	-0.09011	-0.13228
VAR11	1.00000	0.31715	0.20312	0.16171	0.64417	0.19020	0.18042	0.00191	0.18315	-0.01657
VAR12	0.31715	1.00000	0.24585	0.06502	0.31630	0.19518	0.20679	0.17344	0.18217	-0.12591
VAR13	0.20315	0.24585	1.00000	0.27084	-0.13010	0.23054	0.26614	0.20250	0.03170	-0.04520
VAR14	0.16171	0.06502	0.27084	1.00000	0.10449	0.42709	0.49524	0.31634	-0.10370	0.11194
VAR15	0.64417	0.31630	-0.13010	0.10449	1.00000	0.413017	-0.04821	0.08132	-0.10572	0.08693
VAR16	0.19518	-0.13010	0.20054	0.42709	0.13017	1.03000	0.03371	0.07532	-0.00574	0.30590
VAR17	0.18042	0.12679	0.20614	0.49524	-0.04821	0.03371	1.00000	0.58488	-0.12374	0.45555
VAR18	0.00191	0.17344	0.20750	0.31674	0.08332	0.037532	0.58488	1.00000	0.00300	0.10426
VAR19	-0.09011	0.18315	0.19037	0.03770	0.10270	-0.03532	-0.12354	-0.00336	1.00000	1.00000
VAR20	0.13228	-0.01657	-0.12591	0.04520	0.11194	0.03663	0.30590	0.45355	0.10266	0.38824
VAR21	-0.32367	0.31931	-0.15364	0.29003	-0.16376	-0.03963	0.40288	0.49277	0.25860	0.14374
VAR22	0.36297	0.26204	0.08343	0.01903	0.54238	0.14758	-0.14255	0.04589	0.10490	0.21500
VAR23	0.09024	0.18591	0.22927	-0.00231	0.14528	0.2137	0.07538	-0.07531	0.10624	0.31061
VAR24	0.35427	0.29932	-0.12130	0.00568	0.61887	-0.16786	0.03300	0.19251	0.10684	0.19188
VAR25	0.20702	0.25875	-0.08284	0.00568	0.53524	0.04360	-0.14896	0.07609	0.43696	0.27182
VAR26	-0.07633	0.27870	0.16013	0.17548	0.15195	0.09280	0.19074	0.33028	0.22124	0.41594
VAR27	0.16032	0.23485	-0.19521	0.53885	0.08778	0.08778	0.39313	0.44297	0.12398	0.40426
VAR28	0.02042	0.09436	0.21472	0.28103	0.15014	-0.07361	0.17787	0.27036	0.24800	-0.18414
VAR29	-0.06952	0.22530	0.35783	-0.16904	-0.16904	0.03447	0.57536	0.43716	-0.02283	0.09987
VAR30	0.19754	0.27270	0.18208	0.16482	0.45781	-0.12731	0.14210	0.31782	0.27647	0.12200
VAR31	-0.11033	0.04448	0.12490	0.07788	-0.07788	-0.15837	0.31383	-0.06217	0.47213	-0.54435
VAR32	0.14033	0.17201	0.14297	0.16222	0.29171	-0.03507	0.23189	0.39653	0.12107	0.50841
VAR33	0.09923	0.05161	0.28417	0.00222	0.02240	-0.19107	0.20744	0.27560	0.19395	0.02564
VAR34	0.21625	0.20639	-0.08881	0.06908	0.51138	0.14079	-0.05110	0.11090	0.32591	-0.02545
VAR35	0.28457	0.16026	0.38474	0.11316	0.29222	0.23884	0.10399	0.32398	0.17974	0.05439
VAR36	0.26213	0.20131	-0.08992	0.16602	0.43238	0.02906	-0.04435	0.28195	0.05439	-0.17175

	VAR21	VAR22	VAR23	VAR24	VAR25	VAR26	VAR27	VAR28	VAR29	VAR30
VAR01	-0.17341	0.19980	-0.30461	-0.01344	0.12949	-0.03286	0.10827	0.27018	0.01186	-0.03039
VAR02	-0.13224	0.39910	-0.32620	0.25709	0.00557	0.23400	0.30177	-0.43103	0.05973	-0.20630
VAR03	0.05395	0.26784	0.05022	-0.17189	-0.02843	0.25595	0.06769	0.07760	-0.12838	0.07329
VAR04	0.21367	-0.07411	0.30241	-0.11249	-0.07532	0.09483	0.19898	0.10399	0.34355	0.07288
VAR05	0.35388	0.03411	-0.05739	-0.00402	0.17373	0.15111	0.20094	0.17056	0.33752	0.21011
VAR06	0.38341	0.25498	0.36705	0.24019	0.17920	0.54387	0.46068	0.09116	0.34379	0.60169
VAR07	-0.15316	0.24849	0.09741	0.07112	0.13662	0.12632	0.17952	-0.00812	-0.02512	0.18592
VAR08	0.26720	0.11487	0.20045	0.19941	0.34328	0.50537	0.38465	-0.28916	0.37499	0.10480
VAR09	0.18039	0.24647	-0.04793	0.30819	0.10797	0.25282	0.33810	0.35043	0.04136	0.21648
VAR10	0.25866	0.23292	0.10486	0.18513	0.21503	0.26882	0.42532	-0.22861	0.03444	0.14034
VAR11	-0.32367	0.36299	0.04024	0.35327	0.20702	-0.07833	0.16032	0.02042	-0.06952	0.19754
VAR12	0.31901	0.26204	0.18591	0.29312	0.25675	0.27870	0.23485	0.09436	0.22500	0.27270
VAR13	0.25584	-0.08343	0.22927	-0.12310	-0.08284	0.16013	0.19521	0.21422	0.35783	-0.18208
VAR14	0.29003	-0.01906	-0.08231	0.00926	-0.00558	0.17548	0.14442	0.28035	0.26131	0.18482
VAR15	-0.19176	0.43938	0.16528	0.03617	0.21524	0.15125	0.51845	0.15014	0.16904	0.44541
VAR16	-0.03963	0.14758	0.27137	-0.16746	0.04360	0.09280	0.08778	-0.07361	0.03447	-0.12731
VAR17	0.49288	-0.14255	-0.07538	0.33300	-0.14896	0.19074	0.39313	0.17787	0.57536	0.14210
VAR18	0.49277	0.04589	-0.07551	0.19251	0.07609	0.33028	0.44297	0.27030	0.43716	0.31782
VAR19	0.25006	0.10490	0.43824	0.3846	0.3846	0.22124	0.12398	0.24800	-0.02283	0.27647
VAR20	0.38826	0.14374	0.23500	0.34061	0.19188	0.27382	0.44554	-0.00826	0.18414	0.09987
VAR21	1.00000	-0.01729	0.25605	-0.05222	0.18467	0.39805	0.28613	0.08479	0.51252	0.23288
VAR22	-0.01729	1.00000	0.16426	0.54500	0.52199	0.06494	0.31785	-0.08475	-0.16053	0.23384
VAR23	0.22502	0.16826	1.00000	0.07124	0.30922	0.18730	0.29001	-0.09141	0.16014	0.13763
VAR24	-0.03522	0.54500	0.07754	1.00000	0.45197	0.30456	0.43657	0.09141	-0.10302	0.49821
VAR25	0.18467	0.52199	0.36922	0.45197	1.00000	0.33198	0.49970	-0.04178	0.22470	0.47026
VAR26	0.39805	0.06494	0.38730	0.30456	0.33198	1.00000	0.45270	-0.06523	0.26632	0.46332
VAR27	0.28613	0.31785	0.29001	0.43657	0.49970	0.45270	1.00000	0.12965	0.07812	0.49661
VAR28	0.08479	-0.04875	-0.16114	0.09141	-0.04178	-0.06523	0.12965	1.00000	0.19823	0.07537
VAR29	0.31252	0.16053	0.13982	-0.10302	-0.22470	0.26632	0.07812	0.19823	1.00000	0.03425
VAR30	0.23928	0.23384	0.13763	0.49821	0.47026	0.44332	0.49661	0.03425	0.03425	1.00000
VAR31	0.21135	-0.14506	0.24843	0.04351	0.47026	0.20117	-0.01702	0.10220	0.21714	0.23688
VAR32	0.22703	0.24264	0.33984	0.44254	0.23839	0.36071	0.46567	0.37983	0.34012	0.20629
VAR33	-0.24038	-0.09260	-0.35340	0.11782	0.07889	0.20623	0.10139	0.24163	0.30024	-0.04252
VAR34	0.04580	0.46258	0.35340	0.37995	0.59004	0.32540	0.42376	-0.00291	0.30024	0.59127
VAR35	0.06572	0.32388	0.41128	0.37390	0.37114	0.53128	0.37315	0.01444	0.07663	0.28407
VAR36	-0.10670	0.34921	-0.25106	0.30696	0.31215	0.45352	0.35639	0.03286	-0.00495	0.40843

	VAR10	VAR11	VAR12	VAR13	VAR14	VAR15	VAR16
VAR01	0.17352	0.00488	0.00117	0.16019	0.00424	0.00424	0.21073
VAR02	-0.13651	0.13651	0.00488	0.16019	0.00424	0.00424	0.11563
VAR03	-0.30974	0.09547	0.10479	-0.05492	0.46620	0.46620	0.14169
VAR04	0.22351	0.01182	0.29399	-0.05492	0.17138	0.17138	0.13750
VAR05	0.22821	0.16596	0.16596	0.00008	0.26879	0.26879	0.18243
VAR06	0.21452	0.22494	0.16963	0.58344	0.20704	0.20704	0.15493
VAR07	-0.31157	0.11195	0.06652	0.14374	0.32922	0.32922	0.38135
VAR08	-0.03343	0.13254	0.11759	0.37875	0.28062	0.28062	0.28787
VAR09	-0.35573	0.38983	0.22714	0.13436	0.50165	0.50165	0.32427
VAR10	-0.50736	0.14940	0.20229	0.20229	0.07663	0.07663	0.15689
VAR11	-0.13055	0.14033	0.09923	0.21625	0.28457	0.28457	0.26211
VAR12	0.04448	0.17201	0.05181	0.20639	0.16026	0.16026	0.20111
VAR13	0.12496	0.14297	0.28417	-0.06881	0.38479	0.38479	-0.08302
VAR14	-0.05694	0.16222	0.00224	0.06908	0.11316	0.11316	0.16602
VAR15	-0.07768	0.29171	0.02230	0.53138	0.29742	0.29742	0.41234
VAR16	-0.15837	0.03507	0.19107	0.14079	0.23884	0.23884	0.02346
VAR17	0.01383	0.43189	0.20744	-0.05110	0.10399	0.10399	-0.02436
VAR18	-0.06717	0.39653	0.27560	0.11090	0.32398	0.32398	0.28765
VAR19	0.47213	0.12107	0.19395	0.32591	0.17974	0.17974	0.05470
VAR20	-0.12200	0.54435	0.00461	-0.02254	0.26425	0.26425	-0.10473
VAR21	0.21135	0.22703	0.24038	0.04580	0.06572	0.06572	-0.10473
VAR22	-0.14506	0.24264	0.09260	0.46258	0.32348	0.32348	-0.10070
VAR23	0.24503	0.11944	0.05344	0.35340	0.41124	0.41124	0.34721
VAR24	-0.06551	0.44254	0.11782	0.33995	0.37340	0.37340	-0.21304
VAR25	0.24787	0.23879	0.07489	0.59004	0.37114	0.37114	0.30576
VAR26	-0.20137	0.36071	0.20623	0.32542	0.53118	0.53118	0.31574
VAR27	-0.01702	0.46567	0.10139	0.42376	0.37215	0.37215	0.32752
VAR28	0.19720	0.37983	0.24163	-0.00291	0.07444	0.07444	0.32639
VAR29	0.21714	0.34012	0.30024	0.09259	-0.07641	-0.07641	0.03286
VAR30	0.23688	0.20629	0.04252	0.59127	0.28407	0.28407	-0.00495
VAR31	1.00000	0.12156	0.21895	0.29128	0.02190	0.02190	-0.00322
VAR32	0.12156	1.00000	0.31000	0.21758	0.51747	0.51747	0.00795
VAR33	0.21895	0.31000	1.00000	-0.05543	0.13144	0.13144	0.26789
VAR34	0.29128	0.21758	-0.05543	1.00000	0.23005	0.23005	0.23047
VAR35	0.02199	0.51787	0.12614	0.25585	1.00000	1.00000	0.25633
VAR36	-0.05825	0.03055	0.26789	0.43047	0.25633	0.25633	1.00000

DETERMINANT OF CORRELATION MATRIX = 0.00000001 0.62786243D-281