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Omar, A., Uribe, H. & Assmar, E. (2002). Causal attribution of academic success-failure. In P. Boski.; F.J., Van de Vijver; A.M. Chodynicka (Org.). *New Directions in Cross-Cultural Psychology*. Warsaw: Wydawnictwo Instytutu Psychologii PAN, ISBN 83-85459-58-8, pp. 501-516 (728).

CAUSAL ATTRIBUTION OF ACADEMIC SUCCESS AND FAILURE. A CROSS-CULTURAL STUDY INVOLVING ARGENTINA AND BRAZIL

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ABSTRACT

The research project of Causal Attribution of Academic Success-Failure in Latin America is oriented towards the study of interpersonal explanation about academic performance and the collective opinion regarding school performance in endo and exogroups. The theoretical background is based upon Weiner and Mc Clelland's formulations. Groups of Argentinean and Brazilian secondary students classified as "successful" and "not successful" by their mathematics and social science grades teachers, were analysed. Multidimensional analyses of numerical and symbolic data revealed several different relationships between active (nationality, sex, schools, etc.) and illustrative (dimensional meaning of attributional causes and motivational orientation) variables. The theoretical and practical implications of the results are discussed in terms of socio-educational values in the Argentinean and Brazilian cultures.

Hardly any research has been carried out that aimed at identifying characteristic attributional and motivational patterns concerning academic success/failure among Southern Latin-American countries with historical and cultural roots, similar in some features, but diverging in several other ones. The knowledge of these psychosocial factors acquires relevance at the moment of implementing related development policies among nations. It is in this sense that the cross-cultural approach is employed as a suitable means to detect both shared and culture-specific aspects.

Cross-cultural studies, even when employing different methods and strategies for investigation, have in common the fact that they are interested in the existing variability of behavior in different societies or cultural groups. They use it as a way to identify the dimensions of specific behaviors in each culture and those that can be generalised to other cultures as well. On the other hand, they try to explain the variability based on theories about cultural differences. Therefore, cross-cultural psychology is "the study of similarities and differences in individual psychological functioning in various cultural and ethnic groups, of the relationships between psychological variables and sociocultural, ecological and biological variables and of current changes in these variables" (Berry, Poortinga, Segall, & Dasen, 1992, p.2).

The development of such approach makes it necessary that traditional social psychology topics, such as the relation between social motivation, causal attribution and behaviour, be reanalysed. In this sense, systematic cross-cultural research on social motivation and causal attribution has been carried out and its results have contributed to the possibilities of scientific explanation of the variability of social behaviors in different cultures.

According to Weiner's (1980) theory, in an achievement situation, a variety of causal antecedents such as one's past history of success or failure will give rise to specific causal ascriptions. The most widely cited causes of success and failure are ability, effort, task difficulty, and luck. These causes can be classified into three dimensions, which have received broad support from a number of studies (see Weiner, 1986, for a review). The dimensions were as follows: (a) *locus of causality*, reflecting whether the cause is something about the person who has succeeded or failed versus something external to the person; (b) *controllability*, referring to whether or not the cause is under the control of the person or other people; (c) *stability*, referring to whether the cause is constant or variable over time.

Recent studies have underscored the importance of socio-cultural factors and individual motivational orientations in mediating causal attributions. There is evidence that specific cultural values may affect one's perceptions of causes and the dimensional meaning associated with them (Omar et al., 2000) and, there is also evidence that differences in attributional patterns may be related to the differences in individual motives, values or needs (Elliot et al, 1999; Rizza, 1999).

Motives are defined as nonconscious needs, wants, drives, or "recurrent concerns about goal states" (McClelland, 1985), who energise, orient, and select behaviour. According to this conception people cannot accurately report the strengths of their motives. They can, however, describe their values, as values are conscious, cognitive, and evaluative "espousals of goals" (Veroff & Smith, 1985). Since values are defined as conscious entities, they can be assessed through direct self-report questionnaires such as the Edwards Personal Preference Schedule (EPPS, Edwards, 1957). Nevertheless, researchers have increasingly argued that cognition should not be studied separately from motivation; that the "cold" cognitive view and the "hot" motivational view be incorporated into a "warm look" (Sorrentino & Higgins, 1986). This "warm" view is adopted in the present study.

McClelland (1985) concentrated on the study of three positive motives that are learned during the socialization process: power need, affiliation need and achievement need. The power need refers to the efforts of a person to control and manipulate other people. Upon investigating it, McClelland postulated the existence of two forms of this motive: the socialized one and the non-socialized one. The socialized form is oriented towards the needs and interests of the social group. In the other form, called non-socialized, the subject would merely aim at domination, prestige and power for himself, rather than in favour of his group.

The affiliation need is connected with the search for pleasant interpersonal relationships, and also with the wish to be accepted and to receive rewards. The priority behind such motive is the desire to have acceptance and safety rather than the intrinsic desire to establish meaningful interpersonal relationships.

Finally, the achievement need implies the establishment of realistic goals, persistence in reaching them, as well as the assumption of personal responsibility for the success or failure of one's own performance. Such a motive can be qualified as pro-active, and non-reactive, since it constitutes a factor for orientation of behaviours in search of standards of excellence in individual performances, at any field of social, economic, artistic, professional, academic, domestic life, etc.

Social motivation has become one of the psychological processes most directly related to the study of academic performance. It is believed that understanding the motivational profile of students can contribute towards explaining academic success and failure. Nevertheless, there are still few and insufficient intra-cultural and cross-cultural studies that deal with this subject in countries in Latin America, where the school evasion and failure remain to create problems, specially in face of the imperative need to elevate the quality of basic education as an instrument for social and economic development.

Taking into consideration these critical aspects, and having the cross-cultural perspective, the goal of this work is to examine causal attributions for achievement, their structure and dimensional meaning, as perceived by Argentinean and Brazilian high and low achievers in secondary school, and to exploring the prevalent motive-values orientation among students of each national group and their relationships with the causal explanations about their academic performance.

METHOD

Sample and procedures:

The sample consisted of 1033 adolescents, from high school classes in Argentinean and Brazilian schools. The mean ages of these two groups were 16.40 and 16.30 years respectively. Each student was selected by his or her own Math and Social Science teachers according to his or her school achievement. Argentinean students were 541 (234 boys and 307 girls) attending public (341) and private (200) schools in Rosario, Argentina. Brazilian students were 492 (214 boys and 278 girls), attending public (236) and private (256) schools in Rio de Janeiro, Brazil. Approximately 90% of Brazilian students were Caucasian, and 10% were black; while 100% of Argentinean students were Caucasian. In both countries, the schools were selected from various socio-economic backgrounds in order to obtain a representative cross-section of adolescents attending regular schools.

As regard the type of schools, in both countries there are similar differences between public and private ones. Public schools are free-paid, financed by the State and chosen by lower and lower-middle-class people. A poor teaching quality and frequent periods of teachers' strikes characterize this type of schools. On the other hand, private schools are paid, preferred by higher or higher-middle-class people, with a good teaching quality due the smaller number of pupils per classes and theirs well-prepared teachers.

Firstly, students were asked to indicate their perceived performance in an examination taken the previous week. Ten of the most frequent causes were selected. Then, they were asked to rate the importance of these specific causes in relation to their academic performance (effort, ability in study, exam difficulty, home condition, intelligence, teachers' help, luck, family's help, mood, and teachers' bias), and to evaluate these causes along three-dimensional scales of locus, stability and controllability. Semantic Differential technique was used to measure the dimensional meaning of causes. The aim of this technique is to explore the connotative-affective meaning of a number of words (called inductive words) for a given individual. In the present study the inductive words were the ten specific causes.

Example of the Semantic Differential used: "The following are some causes that may possibly affect your academic performance. Do you think these causes are something that you can control (controllable), or that are out of your control (uncontrollable)?"

| | Very | Controllable | Can't decide | Uncontrollable | Very |
|------|--------------|--------------|--------------|----------------|----------------|
| | controllable | | | | uncontrollable |
| Mood | 1 | 2 | 3 | 4 | 5 |

Students rated the meaning of all ten causes along the same dimension first before proceeding to the next dimensions. To determine the absolute dimensional meaning of the specific causes, Chandler & Spies' (1984) method was adopted. A deviation of 0.7 unit from the midpoint of the scale (0.7 unit in our 5-point scale is equivalent to 1 unit in their 7-point scale) was used to decide whether a certain specific cause could be characterized by one of the end in a causal dimension (e.g. if the rating of effort was greater than 3.7 in the controllable dimension, it would be labelled as uncontrollable).

Finally, students were asked to fill in a short version of the EPPS comprising of a subset of 60 out of 250 forced-choice items. The test was introduced as a way of "assessing people's likes and dislikes". Our item selection was orientated to measure the three main positive motives proposed by McClelland: power need, affiliation need and achievement need.

RESULTS

In order to examine the importance assigned to the specific causes, two principal components analysis were performed followed by rotation using the varimax method for eigenvalues greater than unity. With respect to Argentinean group, three components emerged although a scree–test suggested a two-component solution. The first one, which explained 37,6 % of the variance, contained intelligence (with reliability coefficients (alpha) = .627), effort (.578), and ability to study (.555). The second, (explaining 19,8 of the variance) contained luck (.548); family help (.481); home conditions (.456); teacher help (.421); teacher bias (.409), and exam difficulty (.378). In the Brazilian group also emerged two factors, which explained 52% of the total variance. Intelligence (.708); effort (.675); ability to study (.348) falling on the factor 1, and luck (.653); mood (.502); teacher help (.438); exam difficulty (.392); home conditions (.389); family help (.366), and teacher bias (.325), on the second factor.

Which the purpose of seeing how students perceive the meaning of the causes along the theoretical dimensions, and evaluate their motivational orientation, Multiple Correspondence Analysis (MCA) was performed. This kind of factorial analysis permits to know the associations among subjects, variables and categories of variables. The MCA was developed to analyse, to describe and to represent graphically the co-occurrence of variables' categories. The purpose of MCA is to show, by means of one or more graphic representations, the great part of the information contained into a data matrix. In relation to the calculus of MCA, it is possible to distinguish two well-differentiated parts. One of these consists of drawing the main factors (or axis), while the other involves projecting each variable's categories on them, in order to obtain graphic representations (Benzecri, 1992; Escofier & Pages, 1988).

To elucidate the relationship among nationality (Argentinean-Brazilian), sex (boysgirls), academic performance (good-bad), type of schools (public-private), motivational

orientation and attributional dimensional meaning (locus of causality, controllability and stability) of the specific causes, a MCA was performed, using SPAD-Integré 4.0 program (Morineau, 1999). In data matrix, the socio-demographic variables (sex, nationality, type of school and performance) were defined as active nominal ones; motivational orientation (n-achievement, n-power and n-affiliation) as illustrative continuous variables and the meaning of the causes along the theoretical dimensions, as illustrative nominal variables.

Table 1 shows the frequencies, distances to gravity centre, axis co-ordinates, and test values of the modalities of active variables that defined the two main factorial axes. Table 2 presents co-ordinates and correlations between illustrative continuous variables with actives variables. Figure 1 shows the plane of correspondences resulting from both tables.

TABLE 1: Frequencies, distances to gravity centre; axes co-ordinates, and test values of the modalities of the active nominal variables

| ACTIVE VARIABLES | FREQUENCY | DISTANCE* | COORE | DINATE | TEST V | ALUE |
|-------------------|-----------|-----------|--------|--------|--------|--------|
| | | | Axis 1 | Axis 2 | Axis 1 | Axis 2 |
| 1. COUNTRY | | | | | | |
| ARGENTINA | 541 | 0.91 | 0.23 | -0.68 | 7.6 | -22.8 |
| BRAZIL | 492 | 1.10 | -0.25 | 0.74 | -7.6 | 22.8 |
| 2. PERFORMANCE | | | | | | |
| BAD | 484 | 1.13 | -0.81 | -0.32 | -24.3 | -9.6 |
| GOOD | 549 | 0.88 | 0.71 | 0.28 | 24.3 | 9.6 |
| 3. TYPE OF SCHOOL | | | | | | |
| PUBLIC | 436 | 1.37 | -0.27 | 0.82 | -7.4 | 22.4 |
| PRIVATE | 597 | 0.73 | 0.20 | -0.60 | 7.4 | -22.4 |
| 4. SEX | | | | | | |
| BOYS | 478 | 1.16 | -0.86 | -0.14 | -25.5 | -4.2 |
| GIRLS | 555 | 0.86 | 0.74 | 0.12 | 25.5 | 4.2 |

^(*) Distance to centre of gravity

TABLE 2: Correlations between illustrative continuous variables (motivational orientation) and axes (1-2). Total sample (1033 ss).

| CONTINUOUS | COORDINATE CORRELA | | | ATION |
|---------------|--------------------|--------|--------|--------|
| VARIABLES | | | | |
| | Axis 1 | Axis 2 | Axis 1 | Axis 2 |
| n-ACHIEVEMENT | 0.71 | -0.10 | 0.88 | -0.10 |
| n-AFFILIATION | -0.71 | -0.12 | -0.88 | -0.12 |
| n-POWER | -0.04 | 0.97 | -0.02 | 0.99 |

FIGURE 1: Factorial plane defined by active (demographic) and illustrative continuous (motivational orientation) variables.

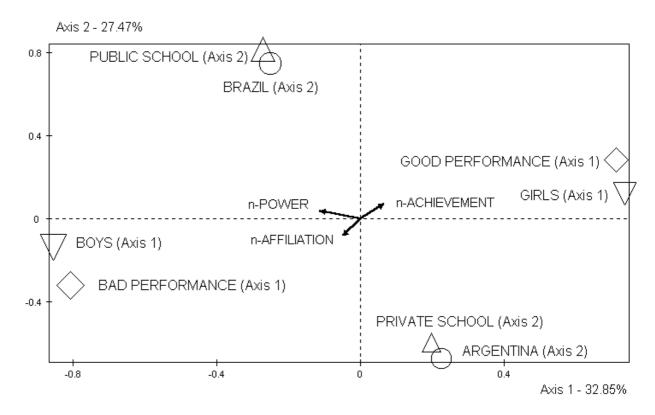


Figure 1 presents the optimal solution for active and illustrative continuous variables. On the first axis of the plane (horizontal) sex and academic performance modalities appear, thus determining two poles which, in this particular case, we shall call "successful girls" (right) and "unsuccessful boys" (left), respectively. On the second axis of the plane (vertical) nationality and type of school modalities appear. With Brazilian and public schools students concentrated in the upper part, and Argentinean and private schools students in the lower part, this axis could be considered as the axis of "national quality of teaching", assimilating the profile of public schools students with the Brazilian point of view and that of the private schools students with the Argentinean one. The correspondence analysis also reveals the relationship between motivational orientations and each pole of factorial plane. Girls and high academic performance students are presenting a higher need for achievement; boys and low academic performance students are demonstrating higher tendency towards affiliations; while Brazilian and public schools students are presenting a higher need for power compared with Argentinean and private schools students.

Semantic dimensional meaning to specific causes is presented in separate tables (and in separate figures). Therefore, Table 3 (and Figure 2) shows how subjects evaluated causes

along locus of causality dimension; Table 4 (and Figure 3) shows their evaluations along controllability dimension and, Table 5 (and Figure 4) along stability dimension. Each Figure (2, 3 and 4) presents the "projections" of the most significant meaning of the specific causes (test-values greater than 3.0) on the two axis mentioned above.

TABLE 3: Frequencies, distances to gravity centre; axes co-ordinates, and test values of the semantic evaluation of specific causes along the locus of causality (internal-external) dimension.

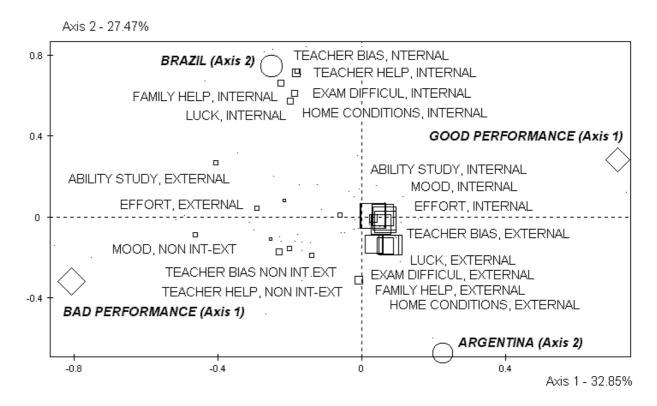
| Axis 1 Axis 2 Axis 1 Axis 2 | NOMINAL VARIABLES | Fr * | DIST** | COORE | INATE | TEST V | ALUE |
|--|---------------------|------|--------|--------|--------|--------|--------|
| EXTERNAL | | | | Axis 1 | Axis 2 | Axis 1 | Axis 2 |
| INTERNAL | 1. EFFORT | | | | | | |
| NON EXT-INTERNAL 23 43.91 -0.43 -0.18 -2.1 -0.9 | EXTERNAL | 76 | 12.59 | -0.29 | 0.04 | -2.6 | 0.4 |
| EXTERNAL 628 0.64 0.04 -0.14 1.4 -5.5 INTERNAL 155 5.66 -0.20 0.57 -2.7 7.7 NON EXT-INTERNAL 250 3.13 0.03 -0.01 0.6 -0.1 3. ABILITY TO STUDY EXTERNAL 87 10.87 -0.40 0.27 -3.9 2.6 INTERNAL 903 0.24 0.06 -0.01 5.4 -1.0 NON EXT-INTERNAL 43 23.02 -0.52 -0.30 -3.5 -2.0 4. FAMILY HELP EXTERNAL 188 4.49 -0.22 0.66 -3.4 10.0 NON EXT-INTERNAL 103 5.03 -0.34 -0.19 -1.5 -2.0 S. EXAM DIFFICULTY EXTERNAL 103 5.03 -0.34 -0.19 -1.5 -2.0 S. EXAM DIFFICULTY EXTERNAL 217 3.86 -0.18 0.71 -3.0 11.8 NON EXT-INTERNAL 212 8.87 -0.01 -0.31 -0.1 -5.1 6. INTELLIGENCE EXTERNAL 60 16.22 -0.25 -0.11 -2.0 -0.9 7. TEACHER HELP EXTERNAL 829 0.25 0.07 -0.03 4.3 -1.8 INTERNAL 908 0.14 0.03 0.000 2.8 0.2 NON EXT-INTERNAL 60 16.22 -0.25 -0.11 -2.0 -0.9 7. TEACHER HELP EXTERNAL 829 0.25 0.07 -0.03 4.3 -1.8 INTERNAL 92 10.23 -0.18 0.72 -1.8 7.2 NON EXT-INTERNAL 112 8.22 -0.35 -0.39 -3.9 -4.4 8. MOOD EXT-INTERNAL 91 10.35 -0.46 -0.09 -4.6 -0.9 9. HOME CONDITIONS EXTERNAL 125 7.26 -0.06 0.01 3.8 0.6 NON EXT-INTERNAL 91 10.35 -0.46 -0.09 -4.6 -0.9 9. HOME CONDITIONS EXTERNAL 125 7.26 -0.20 -0.16 -2.4 -1.9 10. TEACHER BIAS EXTERNAL 125 7.26 -0.20 -0.16 -2.4 -1.9 10. TEACHER BIAS EXTERNAL 125 7.26 -0.20 -0.16 -2.4 -1.9 10. TEACHER BIAS EXTERNAL 125 7.26 -0.20 -0.16 -2.4 -1.9 10. TEACHER BIAS EXTERNAL 84 11.30 0.00 0.74 0.0 7.1 10. TEACHER BIAS EXTERNAL 763 0.35 0.06 0.04 3.0 -2.1 INTERNAL 84 11.30 0.00 0.74 0.0 7.1 10.00 7.1 10.00 7.1 10.00 7.1 10.00 7.1 10.00 7.1 10.00 7.1 10.00 7.1 10.00 7.1 10.00 7.1 10.00 7.1 10.00 7.1 10.00 7.1 10.00 7.1 10.00 7.1 10.00 7.1 10.00 7.1 1 | INTERNAL | 934 | 0.11 | 0.03 | 0.00 | 3.4 | 0.1 |
| EXTERNAL | NON EXT-INTERNAL | 23 | 43.91 | -0.43 | -0.18 | -2.1 | -0.9 |
| INTERNAL | 2 LUCK | | | | | | |
| NON EXT-INTERNAL 250 3.13 0.03 -0.01 0.6 -0.1 3. ABILITY TO STUDY | EXTERNAL | 628 | 0.64 | 0.04 | -0.14 | 1.4 | -5.5 |
| 3. ABILITY TO STUDY EXTERNAL | INTERNAL | 155 | 5.66 | -0.20 | 0.57 | -2.7 | 7.7 |
| EXTERNAL 87 10.87 -0.40 0.27 -3.9 2.6 INTERNAL 903 0.24 0.06 -0.01 5.4 -1.0 NON EXT-INTERNAL 43 23.02 -0.52 -0.30 -3.5 -2.0 4. FAMILY HELP EXTERNAL 188 4.49 -0.22 0.66 -3.4 10.0 NON EXT-INTERNAL 103 5.03 -0.34 -0.19 -1.5 -2.0 S. EXAM DIFFICULTY EXTERNAL 103 5.03 -0.34 -0.19 -1.5 -2.0 S. EXAM DIFFICULTY EXTERNAL 217 3.86 -0.18 0.71 -3.0 11.8 NON EXT-INTERNAL 212 8.87 -0.01 -0.31 -0.1 -5.1 6. INTERNAL 908 0.14 0.03 0.00 2.8 0.2 NON EXT-INTERNAL 60 16.22 -0.25 -0.11 -2.0 -0.9 7. TEACHER HELP EXTERNAL 829 0.25 0.07 -0.03 4.3 -1.8 INTERNAL 92 10.23 -0.18 0.72 -1.8 7.2 NON EXT-INTERNAL 112 8.22 -0.35 -0.39 -3.9 -4.4 8. MOOD EXTERNAL 112 8.22 -0.35 -0.39 -3.9 -4.4 8. MOOD EXTERNAL 817 0.26 0.06 0.01 3.8 0.6 NON EXT-INTERNAL 91 10.35 -0.46 -0.09 -4.6 -0.9 9. HOME CONDITIONS EXTERNAL 125 7.26 -0.06 0.01 3.8 0.6 NON EXT-INTERNAL 91 10.35 -0.46 -0.09 -4.6 -0.9 9. HOME CONDITIONS EXTERNAL 171 0.45 0.09 -0.14 4.1 6.7 INTERNAL 197 4.24 -0.19 0.61 -2.9 9.5 NON EXT-INTERNAL 125 7.26 -0.20 -0.16 -2.4 -1.9 10. TEACHER BIAS EXTERNAL 763 0.35 0.06 0.04 3.0 -2.1 INTERNAL 84 11.30 0.00 0.74 0.0 7.1 | NON EXT-INTERNAL | 250 | 3.13 | 0.03 | -0.01 | 0.6 | -0.1 |
| INTERNAL 903 0.24 0.06 -0.01 5.4 -1.0 NON EXT-INTERNAL 43 23.02 -0.52 -0.30 -3.5 -2.0 4. FAMILY HELP EXTERNAL 742 0.39 0.08 -0.34 3.9 -7.2 INTERNAL 188 4.49 -0.22 0.66 -3.4 10.0 NON EXT-INTERNAL 103 5.03 -0.34 -0.19 -1.5 -2.0 5. EXAM DIFFICULTY EXTERNAL 604 0.71 0.07 -0.15 2.6 -5.5 INTERNAL 217 3.86 -0.18 0.71 -3.0 11.8 NON EXT-INTERNAL 212 8.87 -0.01 -0.31 -0.1 -5.1 6. INTELLIGENCE EXTERNAL 65 14.89 -0.21 0.08 -1.8 0.6 INTERNAL 908 0.14 0.03 0.00 2.8 0.2 NON EXT-INTERNAL 60 16.22 -0.25 -0.11 -2.0 -0.9 7. TEACHER HELP EXTERNAL 829 0.25 0.07 -0.03 4.3 -1.8 INTERNAL 92 10.23 -0.18 0.72 -1.8 7.2 NON EXT-INTERNAL 112 8.22 -0.35 -0.39 -3.9 -4.4 8. MOOD EXTERNAL 125 7.26 -0.06 0.01 -0.7 0.1 INTERNAL 817 0.26 0.06 0.01 3.8 0.6 NON EXT-INTERNAL 91 10.35 -0.46 -0.09 -4.6 -0.9 9. HOME CONDITIONS EXTERNAL 197 4.24 -0.19 0.61 -2.9 9.5 NON EXT-INTERNAL 125 7.26 -0.20 -0.16 -2.4 -1.9 10. TEACHER BIAS EXTERNAL 125 7.26 -0.20 -0.16 -2.4 -1.9 10. TEACHER BIAS EXTERNAL 125 7.26 -0.20 -0.16 -2.4 -1.9 10. TEACHER BIAS EXTERNAL 1430 0.00 0.74 0.0 7.1 10. TEACHER BIAS EXTERNAL 84 11.30 0.00 0.74 0.0 7.1 10. TEACHER BIAS EXTERNAL 84 11.30 0.00 0.74 0.0 7.1 10. TEACHER BIAS T.0.20 T.0 | 3. ABILITY TO STUDY | • | • | | | | |
| NON EXT-INTERNAL 43 23.02 -0.52 -0.30 -3.5 -2.0 | EXTERNAL | 87 | 10.87 | -0.40 | 0.27 | -3.9 | 2.6 |
| A. FAMILY HELP EXTERNAL 742 0.39 0.08 -0.34 3.9 -7.2 INTERNAL 188 4.49 -0.22 0.66 -3.4 10.0 NON EXT-INTERNAL 103 5.03 -0.34 -0.19 -1.5 -2.0 5. EXAM DIFFICULTY EXTERNAL 604 0.71 0.07 -0.15 2.6 -5.5 INTERNAL 217 3.86 -0.18 0.71 -3.0 11.8 NON EXT-INTERNAL 212 8.87 -0.01 -0.31 -0.1 -5.1 6. INTELLIGENCE EXTERNAL 65 14.89 -0.21 0.08 -1.8 0.6 INTERNAL 908 0.14 0.03 0.00 2.8 0.2 NON EXT-INTERNAL 60 16.22 -0.25 -0.11 -2.0 -0.9 7. TEACHER HELP EXTERNAL 829 0.25 0.07 -0.03 4.3 -1.8 INTERNAL 92 10.23 -0.18 0.72 -1.8 7.2 NON EXT-INTERNAL 112 8.22 -0.35 -0.39 -3.9 -4.4 8. MOOD EXTERNAL 125 7.26 -0.06 0.01 -0.7 0.1 INTERNAL 817 0.26 0.06 0.01 3.8 0.6 NON EXT-INTERNAL 91 10.35 -0.46 -0.09 -4.6 -0.9 9. HOME CONDITIONS EXTERNAL 197 4.24 -0.19 0.61 -2.9 9.5 NON EXT-INTERNAL 125 7.26 -0.20 -0.16 -2.4 -1.9 10. TEACHER BIAS EXTERNAL 125 7.26 -0.20 -0.16 -2.4 -1.9 10. TEACHER BIAS EXTERNAL 125 7.26 -0.20 -0.16 -2.4 -1.9 10. TEACHER BIAS EXTERNAL 763 0.35 0.06 0.04 3.0 -2.1 INTERNAL 84 11.30 0.00 0.74 0.0 7.1 | INTERNAL | 903 | 0.24 | 0.06 | -0.01 | 5.4 | -1.0 |
| EXTERNAL 742 0.39 0.08 -0.34 3.9 -7.2 | NON EXT-INTERNAL | 43 | 23.02 | -0.52 | -0.30 | -3.5 | -2.0 |
| INTERNAL | 4. FAMILY HELP | • | • | | | | |
| NON EXT-INTERNAL 103 5.03 -0.34 -0.19 -1.5 -2.0 | EXTERNAL | 742 | 0.39 | 0.08 | -0.34 | 3.9 | -7.2 |
| 5. EXAM DIFFICULTY EXTERNAL 604 0.71 0.07 -0.15 2.6 -5.5 INTERNAL 217 3.86 -0.18 0.71 -3.0 11.8 NON EXT-INTERNAL 212 8.87 -0.01 -0.31 -0.1 -5.1 6. INTELLIGENCE EXTERNAL 65 14.89 -0.21 0.08 -1.8 0.6 INTERNAL 908 0.14 0.03 0.00 2.8 0.2 NON EXT-INTERNAL 60 16.22 -0.25 -0.11 -2.0 -0.9 7. TEACHER HELP EXTERNAL 829 0.25 0.07 -0.03 4.3 -1.8 INTERNAL 92 10.23 -0.18 0.72 -1.8 7.2 NON EXT-INTERNAL 112 8.22 -0.35 -0.39 -3.9 -4.4 8. MOOD EXTERNAL 125 7.26 -0.06 0.01 -0.7 0.1 INTERNAL 91 10.35 -0.46 -0.09 | INTERNAL | 188 | 4.49 | -0.22 | 0.66 | -3.4 | 10.0 |
| EXTERNAL 604 0.71 0.07 -0.15 2.6 -5.5 INTERNAL 217 3.86 -0.18 0.71 -3.0 11.8 NON EXT-INTERNAL 212 8.87 -0.01 -0.31 -0.1 -5.1 6. INTELLIGENCE EXTERNAL 65 14.89 -0.21 0.08 -1.8 0.6 INTERNAL 908 0.14 0.03 0.00 2.8 0.2 NON EXT-INTERNAL 60 16.22 -0.25 -0.11 -2.0 -0.9 7. TEACHER HELP EXTERNAL 829 0.25 0.07 -0.03 4.3 -1.8 INTERNAL 92 10.23 -0.18 0.72 -1.8 7.2 NON EXT-INTERNAL 112 8.22 -0.35 -0.39 -3.9 -4.4 8. MOOD EXTERNAL 125 7.26 -0.06 0.01 -0.7 0.1 INTERNAL 817 0.26 0.06 0.01 3.8 0.6 NON EXT-INTERNAL 91 10.35 -0.46 -0.09 -4.6 -0.9 9. HOME CONDITIONS EXTERNAL 197 4.24 -0.19 0.61 -2.9 9.5 NON EXT-INTERNAL 125 7.26 -0.20 -0.16 -2.4 -1.9 10. TEACHER BIAS EXTERNAL 763 0.35 0.06 0.04 3.0 -2.1 INTERNAL 763 0.35 0.06 0.04 3.0 -2.1 INTERNAL 84 11.30 0.00 0.74 0.0 7.1 | NON EXT-INTERNAL | 103 | 5.03 | -0.34 | -0.19 | -1.5 | -2.0 |
| INTERNAL 217 3.86 -0.18 0.71 -3.0 11.8 NON EXT-INTERNAL 212 8.87 -0.01 -0.31 -0.1 -5.1 | 5. EXAM DIFFICULTY | | | | | | |
| NON EXT-INTERNAL 212 8.87 -0.01 -0.31 -0.1 -5.1 | EXTERNAL | 604 | 0.71 | 0.07 | -0.15 | 2.6 | -5.5 |
| 6. INTELLIGENCE EXTERNAL 65 14.89 -0.21 0.08 -1.8 0.6 INTERNAL 908 0.14 0.03 0.00 2.8 0.2 NON EXT-INTERNAL 60 16.22 -0.25 -0.11 -2.0 -0.9 7. TEACHER HELP EXTERNAL 829 0.25 0.07 -0.03 4.3 -1.8 INTERNAL 92 10.23 -0.18 0.72 -1.8 7.2 NON EXT-INTERNAL 112 8.22 -0.35 -0.39 -3.9 -4.4 8. MOOD EXTERNAL 125 7.26 -0.06 0.01 -0.7 0.1 INTERNAL 817 0.26 0.06 0.01 3.8 0.6 NON EXT-INTERNAL 91 10.35 -0.46 -0.09 -4.6 -0.9 9. HOME CONDITIONS EXTERNAL 197 4.24 -0.19 0.61 -2.9 9.5 NON EXT-INTERNAL 125 | INTERNAL | 217 | 3.86 | -0.18 | 0.71 | -3.0 | 11.8 |
| EXTERNAL 65 14.89 -0.21 0.08 -1.8 0.6 INTERNAL 908 0.14 0.03 0.00 2.8 0.2 NON EXT-INTERNAL 60 16.22 -0.25 -0.11 -2.0 -0.9 7. TEACHER HELP EXTERNAL 829 0.25 0.07 -0.03 4.3 -1.8 INTERNAL 92 10.23 -0.18 0.72 -1.8 7.2 NON EXT-INTERNAL 112 8.22 -0.35 -0.39 -3.9 -4.4 8. MOOD EXTERNAL 125 7.26 -0.06 0.01 -0.7 0.1 INTERNAL 817 0.26 0.06 0.01 3.8 0.6 NON EXT-INTERNAL 91 10.35 -0.46 -0.09 -4.6 -0.9 9. HOME CONDITIONS EXTERNAL 711 0.45 0.09 -0.14 4.1 6.7 INTERNAL 197 4.24 -0.19 0.61 | NON EXT-INTERNAL | 212 | 8.87 | -0.01 | -0.31 | -0.1 | -5.1 |
| INTERNAL 908 0.14 0.03 0.00 2.8 0.2 NON EXT-INTERNAL 60 16.22 -0.25 -0.11 -2.0 -0.9 7. TEACHER HELP EXTERNAL 829 0.25 0.07 -0.03 4.3 -1.8 INTERNAL 92 10.23 -0.18 0.72 -1.8 7.2 NON EXT-INTERNAL 112 8.22 -0.35 -0.39 -3.9 -4.4 8. MOOD EXTERNAL 125 7.26 -0.06 0.01 -0.7 0.1 INTERNAL 817 0.26 0.06 0.01 3.8 0.6 NON EXT-INTERNAL 91 10.35 -0.46 -0.09 -4.6 -0.9 9. HOME CONDITIONS EXTERNAL 197 4.24 -0.19 0.61 -2.9 9.5 NON EXT-INTERNAL 125 7.26 -0.20 -0.16 -2.4 -1.9 10. TEACHER BIAS EXTERNAL 763 0.35 0.06 0.04 3.0 -2.1 INTERNAL 84 11.30 0.00 0.74 0.0 7.1 | 6. INTELLIGENCE | • | • | | | | |
| NON EXT-INTERNAL 60 16.22 -0.25 -0.11 -2.0 -0.9 | EXTERNAL | 65 | 14.89 | -0.21 | 0.08 | -1.8 | 0.6 |
| 7. TEACHER HELP EXTERNAL 829 0.25 0.07 -0.03 4.3 -1.8 INTERNAL 92 10.23 -0.18 0.72 -1.8 7.2 NON EXT-INTERNAL 112 8.22 -0.35 -0.39 -3.9 -4.4 8. MOOD EXTERNAL 125 7.26 -0.06 0.01 -0.7 0.1 INTERNAL 817 0.26 0.06 0.01 3.8 0.6 NON EXT-INTERNAL 91 10.35 -0.46 -0.09 -4.6 -0.9 9. HOME CONDITIONS EXTERNAL 711 0.45 0.09 -0.14 4.1 6.7 INTERNAL 197 4.24 -0.19 0.61 -2.9 9.5 NON EXT-INTERNAL 125 7.26 -0.20 -0.16 -2.4 -1.9 10. TEACHER BIAS EXTERNAL 763 0.35 0.06 0.04 3.0 -2.1 INTERNAL 84 11.30 0. | INTERNAL | 908 | 0.14 | 0.03 | 0.00 | 2.8 | 0.2 |
| EXTERNAL 829 0.25 0.07 -0.03 4.3 -1.8 INTERNAL 92 10.23 -0.18 0.72 -1.8 7.2 NON EXT-INTERNAL 112 8.22 -0.35 -0.39 -3.9 -4.4 8. MOOD EXTERNAL 125 7.26 -0.06 0.01 -0.7 0.1 INTERNAL 817 0.26 0.06 0.01 3.8 0.6 NON EXT-INTERNAL 91 10.35 -0.46 -0.09 -4.6 -0.9 9. HOME CONDITIONS EXTERNAL 711 0.45 0.09 -0.14 4.1 6.7 INTERNAL 197 4.24 -0.19 0.61 -2.9 9.5 NON EXT-INTERNAL 125 7.26 -0.20 -0.16 -2.4 -1.9 10. TEACHER BIAS EXTERNAL 763 0.35 0.06 0.04 3.0 -2.1 INTERNAL 84 11.30 0.00 0.74 0.0 | NON EXT-INTERNAL | 60 | 16.22 | -0.25 | -0.11 | -2.0 | -0.9 |
| INTERNAL 92 10.23 -0.18 0.72 -1.8 7.2 NON EXT-INTERNAL 112 8.22 -0.35 -0.39 -3.9 -4.4 8. MOOD | 7. TEACHER HELP | • | • | | | | |
| NON EXT-INTERNAL 112 8.22 -0.35 -0.39 -3.9 -4.4 8. MOOD EXTERNAL 125 7.26 -0.06 0.01 -0.7 0.1 INTERNAL 817 0.26 0.06 0.01 3.8 0.6 NON EXT-INTERNAL 91 10.35 -0.46 -0.09 -4.6 -0.9 9. HOME CONDITIONS EXTERNAL 711 0.45 0.09 -0.14 4.1 6.7 INTERNAL 197 4.24 -0.19 0.61 -2.9 9.5 NON EXT-INTERNAL 125 7.26 -0.20 -0.16 -2.4 -1.9 10. TEACHER BIAS EXTERNAL 763 0.35 0.06 0.04 3.0 -2.1 INTERNAL 84 11.30 0.00 0.74 0.0 7.1 | EXTERNAL | 829 | 0.25 | 0.07 | -0.03 | 4.3 | -1.8 |
| 8. MOOD EXTERNAL 125 7.26 -0.06 0.01 -0.7 0.1 INTERNAL 817 0.26 0.06 0.01 3.8 0.6 NON EXT-INTERNAL 91 10.35 -0.46 -0.09 -4.6 -0.9 9. HOME CONDITIONS EXTERNAL 711 0.45 0.09 -0.14 4.1 6.7 INTERNAL 197 4.24 -0.19 0.61 -2.9 9.5 NON EXT-INTERNAL 125 7.26 -0.20 -0.16 -2.4 -1.9 10. TEACHER BIAS EXTERNAL 763 0.35 0.06 0.04 3.0 -2.1 INTERNAL 84 11.30 0.00 0.74 0.0 7.1 | INTERNAL | 92 | 10.23 | -0.18 | 0.72 | -1.8 | 7.2 |
| EXTERNAL 125 7.26 -0.06 0.01 -0.7 0.1 INTERNAL 817 0.26 0.06 0.01 3.8 0.6 NON EXT-INTERNAL 91 10.35 -0.46 -0.09 -4.6 -0.9 9. HOME CONDITIONS EXTERNAL 711 0.45 0.09 -0.14 4.1 6.7 INTERNAL 197 4.24 -0.19 0.61 -2.9 9.5 NON EXT-INTERNAL 125 7.26 -0.20 -0.16 -2.4 -1.9 10. TEACHER BIAS EXTERNAL 763 0.35 0.06 0.04 3.0 -2.1 INTERNAL 84 11.30 0.00 0.74 0.0 7.1 | NON EXT-INTERNAL | 112 | 8.22 | -0.35 | -0.39 | -3.9 | -4.4 |
| INTERNAL | 8. MOOD | | | | | | |
| NON EXT-INTERNAL 91 10.35 -0.46 -0.09 -4.6 -0.9 9. HOME CONDITIONS EXTERNAL 711 0.45 0.09 -0.14 4.1 6.7 INTERNAL 197 4.24 -0.19 0.61 -2.9 9.5 NON EXT-INTERNAL 125 7.26 -0.20 -0.16 -2.4 -1.9 10. TEACHER BIAS EXTERNAL 763 0.35 0.06 0.04 3.0 -2.1 INTERNAL 84 11.30 0.00 0.74 0.0 7.1 | EXTERNAL | 125 | 7.26 | -0.06 | 0.01 | -0.7 | 0.1 |
| 9. HOME CONDITIONS EXTERNAL 711 0.45 0.09 -0.14 4.1 6.7 INTERNAL 197 4.24 -0.19 0.61 -2.9 9.5 NON EXT-INTERNAL 125 7.26 -0.20 -0.16 -2.4 -1.9 10. TEACHER BIAS EXTERNAL 763 0.35 0.06 0.04 3.0 -2.1 INTERNAL 84 11.30 0.00 0.74 0.0 7.1 | INTERNAL | 817 | 0.26 | 0.06 | 0.01 | 3.8 | 0.6 |
| EXTERNAL 711 0.45 0.09 -0.14 4.1 6.7 INTERNAL 197 4.24 -0.19 0.61 -2.9 9.5 NON EXT-INTERNAL 125 7.26 -0.20 -0.16 -2.4 -1.9 10. TEACHER BIAS EXTERNAL 763 0.35 0.06 0.04 3.0 -2.1 INTERNAL 84 11.30 0.00 0.74 0.0 7.1 | NON EXT-INTERNAL | 91 | 10.35 | -0.46 | -0.09 | -4.6 | -0.9 |
| INTERNAL 197 4.24 -0.19 0.61 -2.9 9.5 NON EXT-INTERNAL 125 7.26 -0.20 -0.16 -2.4 -1.9 10. TEACHER BIAS EXTERNAL 763 0.35 0.06 0.04 3.0 -2.1 INTERNAL 84 11.30 0.00 0.74 0.0 7.1 | 9. HOME CONDITIONS | | | | | | |
| NON EXT-INTERNAL 125 7.26 -0.20 -0.16 -2.4 -1.9 10. TEACHER BIAS EXTERNAL 763 0.35 0.06 0.04 3.0 -2.1 INTERNAL 84 11.30 0.00 0.74 0.0 7.1 | EXTERNAL | 711 | 0.45 | 0.09 | -0.14 | 4.1 | 6.7 |
| 10. TEACHER BIAS EXTERNAL 763 0.35 0.06 0.04 3.0 -2.1 INTERNAL 84 11.30 0.00 0.74 0.0 7.1 | INTERNAL | 197 | 4.24 | -0.19 | 0.61 | -2.9 | 9.5 |
| EXTERNAL 763 0.35 0.06 0.04 3.0 -2.1 INTERNAL 84 11.30 0.00 0.74 0.0 7.1 | NON EXT-INTERNAL | 125 | 7.26 | -0.20 | -0.16 | -2.4 | -1.9 |
| INTERNAL 84 11.30 0.00 0.74 0.0 7.1 | 10. TEACHER BIAS | • | • | | | - | |
| | EXTERNAL | 763 | 0.35 | 0.06 | 0.04 | 3.0 | -2.1 |
| NON EXT-INTERNAL 186 4.55 -0.23 -0.17 -3.4 2.6 | INTERNAL | 84 | 11.30 | 0.00 | 0.74 | 0.0 | 7.1 |
| | NON EXT-INTERNAL | 186 | 4.55 | -0.23 | -0.17 | -3.4 | 2.6 |

The extreme modalities (very internal and very external) were assimilating to internal and external modalities respectively because of their scanty frequencies.

^(*) Frequency

^(**) Distance to centre of gravity

FIGURE 2: Projections on the factorial plane of the connotative meaning of nominal illustrative variables (specific causes), evaluated along the locus of causality dimension.



Brazilian students perceive environmental causes (luck, exam difficulty, home conditions, teacher help, family help and teacher bias) as internal ones. In contrast, Argentinean students have a connotative-affective perception of these causes more proximate to theoretical meaning. On the other hand, bad students perceive some personal causes such as effort and ability to study as external ones, while these causes are internal for good students.

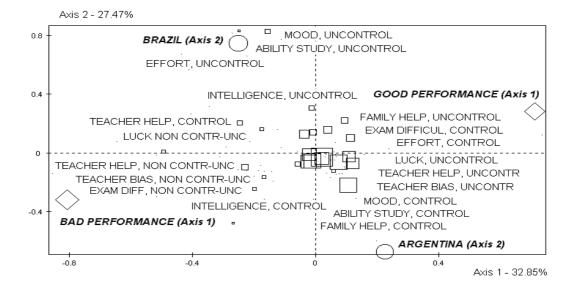
TABLE 4: Frequencies, distances to gravity centre; axes co-ordinates, and test values of the semantic evaluation of specific causes along the controllability (controllable-uncontrollable) dimension.

| NOMINAL VARIABLES | Fr * | DIST** | COORE | DINATE | TEST V | /ALUE |
|---------------------|------|--------|--------|--------|--------|--------|
| | | | Axis 1 | Axis 2 | Axis 1 | Axis 2 |
| 1. EFFORT | | | | | | |
| CONTROL | 974 | 0.06 | 0.03 | -0.02 | 4.2 | -3.2 |
| NON CONTR-UNCTR | 18 | 56.39 | -0.75 | -0.20 | -3.2 | -0.9 |
| UNCONTROL | 41 | 24.20 | -0.44 | 0.67 | -3.8 | 4.4 |
| 2 LUCK | | | | | | |
| CONTROL | 102 | 9.13 | -0.17 | 0.16 | -1.9 | 1.7 |
| NON CONTR-UNCTR | 168 | 5.15 | -0.25 | 0.20 | -3.5 | 2.8 |
| UNCONTROL | 763 | 0.35 | 0.08 | -0.07 | 4.2 | -3.6 |
| 3. ABILITY TO STUDY | | | | | | |
| CONTROL | 951 | 0.09 | 0.02 | -0.03 | 2.4 | -3.5 |
| NON CONTR-UNCTR | 29 | 34.62 | -0.27 | 0.48 | -1.5 | -2.6 |

| UNCONTROL | 53 | 18.49 | -0.25 | 0.83 | -1.8 | 6.2 |
|--------------------|-----|-------|-------|-------|------|-------|
| 4. FAMILY HELP | | 1 | | I | I | |
| CONTROL | 652 | 0.58 | -0.02 | -0.06 | -0.9 | -2.5 |
| NON CONTR-UNCTR | 149 | 5.93 | -0.06 | -0.08 | -0.8 | -1.0 |
| UNCONTROL | 232 | 3.45 | 0.10 | 0.22 | 1.7 | 3.8 |
| 5. EXAM DIFFICULTY | • | | | • | • | |
| CONTROL | 343 | 2.01 | 0.04 | 0.16 | 0.9 | 3.5 |
| NON CONTR-UNCTR | 130 | 6.95 | -0.20 | -0.25 | -2.4 | -3.0 |
| UNCONTROL | 560 | 0.84 | 0.02 | -0.04 | 0.7 | -1.3 |
| 6. INTELLIGENCE | | | | | | |
| CONTROL | 715 | 0.44 | -0.01 | -0.05 | -0.4 | -2.6 |
| NON CONTR-UNCTR | 135 | 0.65 | 0.06 | -0.12 | 0.7 | -1.5 |
| UNCONTROL | 183 | 4.64 | -0.01 | 0.30 | -0.2 | 4.5 |
| 7. TEACHER HELP | | | | | | |
| CONTROL | 379 | 1.73 | -0.04 | 0.12 | -0.9 | 3.0 |
| NON CONTR-UNCTR | 157 | 5.58 | -0.30 | -0.07 | -4.1 | -0.9 |
| UNCONTROL | 497 | 1.08 | 0.12 | -0.07 | 3.8 | -2.3 |
| 8. MOOD | | | | | | |
| CONTROL | 737 | 0.40 | 0.11 | -0.22 | 5.5 | -11.2 |
| NON CONTR-UNCTR | 100 | 9.33 | -0.49 | 0.01 | -5.2 | 0.1 |
| UNCONTROL | 196 | 4.27 | -0.15 | 0.83 | -2.4 | 12.8 |
| 9. HOME CONDITIONS | | | | | | |
| CONTROL | 625 | 0.65 | -0.02 | -0.01 | -0.8 | -0.5 |
| NON CONTR-UNCTR | 124 | 7.33 | -0.17 | -0.17 | -2.0 | -2.0 |
| UNCONTROL | 284 | 2.64 | 0.12 | 0.10 | 2.3 | 2.0 |
| 10. TEACHER BIAS | | | | | | · |
| CONTROL | 274 | 2.77 | -0.01 | 0.14 | -0.1 | 2.7 |
| NON CONTR-UNCTR | 240 | 3.30 | -0.23 | -0.10 | -4.0 | -1.7 |
| UNCONTROL | 519 | 0.99 | 0.11 | -0.03 | 3.5 | -0.9 |

The extreme modalities (very controllable and very uncontrollable) were assimilating to controllable and uncontrollable modalities respectively because of their scanty frequencies.

FIGURE 3: Projections on the factorial plane of the connotative meaning of nominal illustrative variables (specific causes), evaluated along the controllability dimension.



^(*) Frequency

^(**) Distance to centre of gravity

Brazilian students believe that exam difficulty and teacher bias are causes under their control, while some personal causes such as effort, intelligence, ability to study and mood are uncontrollable ones. On the opposite, Argentinean students evaluate these causes as controllable ones, including family help in this category. Good students show a realistic attributional profile. They think that effort is under their control, while causes such as luck, teacher help and teacher bias are out of their control. On the other pole of axis 1, bad students perceive some causes as lacking in connotative-affective meaning along the controllability dimension.

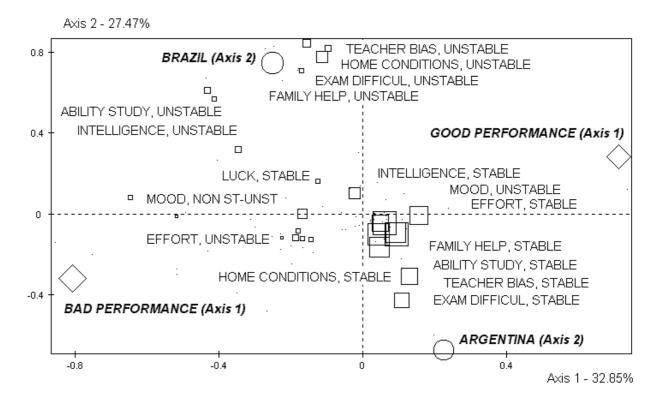
TABLE 5: Frequencies, distances to gravity centre; axes co-ordinates, and test values of the semantic evaluation of specific causes along the stability (stable-unstable) dimension.

| NOMINAL VARIABLES | Fr * | DIST** | COORD | INATE | TEST V | ALUE |
|---------------------|------|--------|--------|--------|--------|--------|
| | | | Axis 1 | Axis 2 | Axis 1 | Axis 2 |
| 1. EFFORT | | | - | | | |
| NON STABLE-UNSTAB | 18 | 56.39 | -0.52 | -0.27 | -2.2 | -1.2 |
| STABLE | 591 | 0.75 | 0.24 | 0.03 | 8.9 | 1.0 |
| UNSTABLE | 424 | 1.44 | -0.31 | -0.03 | -8.3 | -0.7 |
| 2 LUCK | | • | | | | |
| NON STABLE-UNSTAB | 129 | 7.01 | -0.12 | 0.16 | -1.5 | 2.0 |
| STABLE | 155 | 5.66 | -0.35 | 0.32 | -4.7 | 4.3 |
| UNSTABLE | 749 | 0.38 | 0.09 | -0.09 | 4.8 | -4.8 |
| 3. ABILITY TO STUDY | | | | | | |
| NON STABLE-UNSTAB | 36 | 27.69 | -0.52 | -0.02 | -3.2 | -0.1 |
| STABLE | 853 | 0.21 | 0.09 | -0.10 | 6.6 | -7.1 |
| UNSTABLE | 144 | 6.17 | -0.43 | 0.61 | -5.66 | 7.9 |
| 4. FAMILY HELP | | | | | | |
| NON STABLE-UNSTAB | 69 | 13.97 | -0.22 | -0.12 | -1.9 | -1.0 |
| STABLE | 830 | 0.24 | 0.05 | -0.10 | 3.0 | -6.8 |
| UNSTABLE | 134 | 6.71 | -0.17 | 0.71 | -2.1 | 8.7 |
| 5. EXAM DIFFICULTY | | | | | | |
| NON STABLE-UNSTAB | 126 | 7.20 | -0.17 | -0.31 | -2.0 | -3.8 |
| STABLE | 551 | 0.87 | 0.11 | -0.43 | 3.8 | -14.8 |
| UNSTABLE | 356 | 1.90 | -0.11 | 0.78 | -2.6 | 18.1 |
| 6. INTELLIGENCE | | | | | | |
| NON STABLE-UNSTAB | 89 | 10.61 | -0.14 | -0.13 | -1.4 | -1.3 |
| STABLE | 849 | 0.22 | 0.06 | -0.05 | 4.2 | -3.4 |
| UNSTABLE | 95 | 9.87 | -0.41 | 0.57 | -4.2 | 5.8 |
| 7. TEACHER HELP | | | | | | |
| NON STABLE-UNSTAB | 115 | 7.98 | -0.18 | -0.08 | -2.0 | -1.0 |
| STABLE | 358 | 1.89 | -0.02 | 0.10 | -0.5 | 2.4 |
| UNSTABLE | 560 | 0.84 | 0.05 | -0.05 | 1.7 | -1.7 |
| 8. MOOD | | | | | | |
| NON STABLE-UNSTAB | 75 | 12.77 | -0.65 | 0.08 | -5.8 | 0.7 |
| STABLE | 316 | 2.27 | -0.17 | 0.00 | -3.5 | -0.1 |
| UNSTABLE | 642 | 0.61 | 0.16 | -0.01 | 6.5 | -0.3 |
| 9. HOME CONDITIONS | | | | | | |
| NON STABLE-UNSTAB | 116 | 7.91 | -0.17 | -0.3 | -1.9 | -1.4 |
| STABLE | 748 | 0.38 | 0.05 | -0.16 | 2.4 | -8.6 |
| UNSTABLE | 169 | 5.11 | -0.09 | 0.82 | -1.3 | 11.6 |

| 10. TEACHER BIAS | | | | | | |
|-------------------|-----|------|-------|-------|------|-------|
| NON STABLE-UNSTAB | 206 | 4.01 | -0.19 | -0.12 | 3.0 | -1.9 |
| STABLE | 583 | 0.77 | 0.13 | -0.31 | 4.8 | -11.4 |
| UNSTABLE | 244 | 3.23 | -0.15 | 0.84 | -2.8 | 15.1 |

The extreme modalities (very stable and very unstable) were assimilating to stable and unstable modalities respectively because of their scanty frequencies.

FIGURE 4: Projections on the factorial plane of the connotative meaning of nominal illustrative variables (specific causes), evaluated along the stability dimension.



Finally, in relation to stability perceived over time of the specific causes, Figure 4 presents some important differences between nationality and academic performance. Good students show significant differences with bad students in relation to the stability perceived over time of same specific causes. They think that intelligence and effort are two invariable causes over time, while mood and luck are perceived as unstable causes. In contrast, bad students perceive effort as unstable and luck as stable causes. Regarding nationality, opposite attributional mechanisms are observed. Argentinean students perceive most of the causes as stables (ability to study; exam difficult; family help; home conditions; and teacher bias), while Brazilian student perceive these some causes as unstable ones.

^(*) Frequency

^(**) Distance to centre of gravity

CONCLUSION

Important asymmetries are observed in attributional patterns related to academic performance between Argentinean and Brazilian students. In their explanations about their academic success, Argentinean students privilege controllability of personal causes and stability of the situational ones; while Brazilian students underline instability of the environmental conditions, and uncontrollability of individual causes.

Argentinean adolescents' differentiated causes more along the dimension linked with affect (controllability) and they didn't show discrepancy between the perceived and theoretical dimensional meanings. Brazilian adolescents differentiated causes more along the dimensions related to expectancy of future success (stability), and evaluated causes as more internal and uncontrollable than Argentinean people. These contrasts may be consequence of different cultural background and socialization processes. Brazilians' attributional pattern, remarkably self-protective, would be reflecting a socialization profile characterized by collectivist values and power expectations. Argentinean attributional pattern, based on the self-confidence of the own attributes, could be a result of the increasing tendency towards individualistic values of the Argentinean people.

Apart from national differences, certain attributional and motivational contrasts vary with gender and academic performance. A close agreement between the perceived and theoretical (pre-assigned) dimensional meaning of the specific causes could be perceived among good students (mainly girls, and those achievement-oriented). On the other hand, an indifferent attributional attitude is observed among bad students (mainly boys, and those affiliation-oriented), who perceive most of the causes as lacking in connotative-affective meaning.

The achievement and affiliation motives related to high and low academic performance were regardless the student's nationality. It confirms former studies, according to which, successful individuals, in any area, construct life projects based on realistic goals and have a higher degree of internal requirement, which make them persist in the tasks to obtain such goals. The affiliation motive was associated to school failure in both nationalities. The need for interpersonal contacts deviate students from their individual tasks, which would became in poor final school outcomes. Professionals who work in educational area should

adopt strategies to avoid such behaviors when they occur at an exaggerated level in the classroom. In conclusion, nationality seems to be an important condition for having a different attributional profile with respect to academic performance, however it does not necessarily contribute to a better comprehension of the relationship between social motivation and academic outcomes.

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