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**COGNITIVE AND MOTIVATIONAL CONSTRUCTS IN
PORTUGUESE AND CHINESE STUDENTS: AN EXPLORATORY
CASE STUDY**

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Abstract

Considering ever-increasing globalization and the context of multicultural societies the need of cross-cultural studies is vital for understanding the changes in cultural phenomena and to introduce adaptations in multicultural educational contexts. The culture has an intrinsic relation with the way we think and has also an important function in collective programming of the mind. In this sense, it is important to analyze their relationship with cognitive and motivational constructs, namely the concepts “projects of future”, “subjective happiness”, “satisfaction with life” and “locus of control”. These constructs are essential to psychology since they have significant implications in the adaptation process and behavioral regulation. Based on these assumptions, the present study is organized as an exploratory case study with a convenience sample limited to a small number of Portuguese and Chinese young people attending a degree in education at the Polytechnic Institute of Castelo Branco, Portugal. The findings suggest the existence of coincident aspects in the profiles of the Portuguese and Chinese students in the motivational and cognitive variables analyzed that seems to corroborate the convergence perspective that suggests that the recent socioeconomics changes in Chinese society and ever-increasing globalization contribute to a gradual convergence of concepts and perspectives with the western culture.

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Keywords: Portuguese and Chinese students, Projects of future, locus of control, satisfaction with life, subjective happiness.



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1. Introduction

Similar to what has been happening in the last decade with several institutions of higher education in Portugal, the Polytechnic Institute of Castelo Branco celebrated, in the last academic year (2017-2018), an institutional protocol for the inclusion of students of the Polytechnic Institute of Macao, China, to the frequency of the 2nd year of the graduation course in Teaching the Chinese Language as a Foreign Language. These protocols also predict the inclusion of two more classes of Chinese students in the next academic year.

This fact configures the adequate context to analyze the process of adaptation of the Chinese students to the academic environment in Portugal, allowing to identify and to reflect on their difficulties and the added value for the teaching and student community. In this line and considering that most intercultural studies identify significant differences in conceptions about the world and interpersonal relations between the Chinese culture and Western culture, we intend to compare the conceptions about life projects, valuation of academic education, locus of control, subjective happiness and satisfaction with life between the two groups of our sample, both attending a degree in education at the Polytechnic Institute of Castelo Branco, Portugal.

The questions that guided this study are as follows:

- Can the cultural differences between young Chinese and Portuguese people, education undergraduates in Portugal, influence their conceptions about life projects, valuation of academic education, locus of control, subjective well-being and satisfaction with life?
- Will the recent socioeconomics changes in Chinese society and ever-increasing globalization contribute to a gradual convergence of concepts and perspectives between these two cultures?

Two main perspectives explain how globalization may affect cultural changes in China. According to Ralston, Gustafson, Cheng & Terpstra (1993), referred by Stocks, April & Nandani (2012): the divergence perspective (Theiman, April & Blass, 2006) indicates that culture is the primary driver of values in any society, inhibiting change in shared conceptions in Eastern culture; the convergence perspective suggests that the recent socioeconomics changes in Chinese society and ever-increasing globalization contribute to a gradual convergence of concepts and perspectives with the western culture.

Based on these two perspectives, we describe some of the aspects traditionally associated with Chinese culture that we consider to be able to have implications in the variables analyzed in the present study:

- a) One of the fundamental aspects of Chinese culture is related to the great respect for hierarchies, particularly with regard to older people and family members. Maintaining a logical harmonic cohesion group, itself attesting to the value that has the idea of a collective for the Chinese society, the individual is impelled to understand, accept and act respecting his role in the world – namely not expressing his opinion, especially if it is critical (Bucknall, 1999).
- b) The construction of influences and contacts networks, known as *guanxi*, is another distinctive feature of Chinese culture. While in Portugal, close concepts such as clientelism or nepotism are socially disapproved, in China, *guanxi* is an inherent characteristic of the system (Bucknall, 1999). The exchange of gifts, beyond a normal gesture of kindness, can be a form of construction of this *guanxi* (Dias, 2015).

Notably, the differences between the individualist values of the western cultures and collectivism present in eastern cultures have shown to influence both locus of control (Spector et al., 2002) and subjective well-being (Diener, Diener & Diener, 1995).

1.1. The concepts of Happiness, Subjective Well-being and Satisfaction with life

To be happy is the most profound and ultimate objective of the human being in any culture and at any time in human history. Being a subjective concept, it is marked by cultural and social representations and it is associated to differential variables and mediators.

The concept of subjective well-being which corresponds to the cognitive and affective evaluation that each individual does as to their own life (Diener, Lucas & Oishi, 2002) and integrates different components (Diener, 2000):

- **Satisfaction with life:** it is related to the judgments that each individual does with regard to his own life in general;
- **Satisfaction with important areas:** it has to do with satisfaction in different areas of existence, such as family or professional activity;
- **Positive emotions:** life experiences characterised by pleasant emotions with few unpleasant emotions.

In line with this and according to Ryan and Deci (2001) the construct “satisfaction with life” associated with positive emotions and the absence of negative emotions are three components of subjective well-being (SWB) which is considered as the primary index of well-being in existing literature. Also, the combination of the three components of SWB is often termed as happiness (Ryan & Deci, 2001).

In short, subjective happiness involves positive emotional experiences, rarely negative emotional experiences such as depression or anxiety, and satisfaction not only in various aspects of life but in life as a whole (Coleta & Coleta, 2005).

Recent studies defined well-being as a health status in social, emotional, physical and spiritual domains (Cloninger & Zohar, 2011). Other researches associated this construct with resilience or the competence in dealing with stress, adversity and adaptability (Eley et al., 2013).

On the other hand, some researches consider that a high level of well-being is vital for students to achieve in academic domains (Marks & Wade, 2015).

1.2. The concept of Locus of Control

The construct of locus of control intended to explain the individual’s perception of the origin of control over the events, having it being centred on the subject itself (internal) or on external circumstances of themselves (external).

Rotter (1966), author of the first evaluation scale for *locus of control*, considers that individuals who present an internal *locus of control* generally consider that the events are contingent to their own behaviour to personal characteristics. As such, individuals who attribute the cause of events to luck, to coincidence, to faith, as well as to the power of others, demonstrate external *locus of control*.

Empirical studies and the conceptualization of this concept have led to contradictory results and, already in the seventies, there are critics as to the understanding of its nature (Graziano, 2005). Phares

(1976) states that some studies distorted the original concept by considering the locus of control as a stable dimension of personality. In the same way, Lijccourt (1976 referred to by Graziano, 2005) states that the *locus of control* is not a psychological characteristic which is uniformly manifested through time or situations.

Apart from the misunderstandings of the nature of the construct in analysis, in Graziano's (2005) opinion there have been other erroneous analyses, namely those which consider the *locus of control* as exclusively internal or external. This Manichaeic view, as well as the accentuation of its internality, has provoked discussions being them on its nature, on its one-dimensional character and on its vulnerability to social norms (Fournier & Jeanrie, 2003, referred by Graziano, 2005).

Rotter (1975) also takes on the critical perspective on the simplification of the *locus of control* as that fact ended up leading to an abusive association to the internality of positive factors and externality of negative processes. There is opposition to this analysis of the ascertainment that a high index of internality may indicate a distorted view of reality as it leads the subject to believe that they have "absolute" power over events. This "interpretation" reveals incapacity to know and accept personal limitations more than skills to face them.

The underlying conception of the *locus of control* construct, namely about the organization of its dimensions, has conditioned the tools used in its evaluation. Rotter, despite recognizing the existence of associated sub factors, defended the one-dimensional character of this construct. According to this presumption, its scale provides an average which corresponds to the perception that each person is in control of his own life or to the degree which he perceives that their destiny is out of their control (Graziano, 2005).

In turn, Levenson (1974) states that the concept "locus of control" integrates three factors:

- Perception of the power over their own life;
- Expectation of control over political and social institutions;
- Perception of the role played by internal and external factors in society in general.

Considering that this perspective could provide a more global understanding and, simultaneously, differentiated from the construct in analysis, the option was to use the Levenson Scale in this study.

1.3. Locus of Control and Subjective Happiness

Perceived control is expressed differently in collectivist cultures, like Chinese culture, compared to individualist cultures, showing either primary or secondary control. According to Weisz, Rothbaum & Blackburn, (1984) referred by Stocks, April & Lynton (2012), primary control refers to when an individual attempts to control the environment through direct intervention, whereas secondary control occurs when an individual experiences feelings of control through alignment with a more powerful individual or party, or through mediation of his or her emotional response. Primary control is likened to internal locus of control and secondary control is likened to external locus of control.

Spector et al. (2002) note that collectivists culture develop secondary control because they have been socialized to subordinate personal control, rather than the primary control exhibited by individualist cultures.

Moreover, collectivists do not find this secondary control distressing, given their expectation that their direct personal control will be limited.

Diener, Diener and Diener (1995) have found that countries that emphasize individualism and have a greater focus on freedom and human rights tend to have citizens with higher subjective well-being.

On the other hand, internal locus of control has been linked with academic success (Gifford, Briceño-Perriott & Mianzo, 2006), higher self-motivation and social maturity (Nelson & Mathias, 1995), lower incidences of stress and depression (Garber & Seligman, 1980).

Kulshrestha and Sen (2006) have noted significant negative correlation between locus of control and subjective well-being, which is to say that individuals with an external locus of control are significantly less happy than their internal counterparts. It is noted that internals actively manipulate their environments, thus acting to take control of events and to change dissatisfactory conditions (Kulshrestha & Sen, 2006). Pereira (2013) identify a positive correlation between the Internal Locus of Control and higher levels of Satisfaction with Life in a sample of students attending higher education.

Considering the sample of this study it will also be interesting to see if the relationship between these two variables is expressed in the same direction in the Portuguese and Chinese students.

2. Problem Statement

Considering ever-increasing globalization and the context of multicultural societies the need of cross-cultural studies is vital for understanding the changes in cultural phenomena and to introduce adaptations in multicultural educational contexts. The culture has an intrinsic relation with the way we think and has also an important function in collective programming of the mind. In this sense, it is important to analyze their relationship with cognitive and motivational constructs, namely the concepts “projects of future”, “subjective happiness”, “satisfaction with life” and “locus of control”. These constructs are essential to psychology since they have significant implications in the adaptation process and behavioral regulation.

3. Research Questions

The questions that guided this study are as follows:

- Can the cultural differences between young Chinese and Portuguese people, education undergraduates in Portugal, influence their conceptions about life projects, valuation of academic education, locus of control, subjective well-being and satisfaction with life?
- Will the recent socioeconomics changes in Chinese society and ever-increasing globalization contribute to a gradual convergence of concepts and perspectives between these two cultures?

4. Purpose of the Study

The objectives of the present study are as follows:

- Compare the conceptions about life projects, valuation of academic education, locus of control, subjective well-being and satisfaction with life between the two groups of our sample (13 Portuguese and 19 Chinese) attending two higher education courses at the Polytechnic Institute of Castelo Branco, Portugal.

- Identify and analyze the relationships between the variables “Locus of Control”, “Satisfaction with Life” and “Subjective Happiness” in the two groups of our sample.

5. Research Methods

The study is organized as an exploratory case study using quantitative techniques for data collection.

5.1. Sample

In this study it is employed a convenience non-probabilistic sample (Gil, 2006). There were 32 individuals (N=32) adults, of both sexes who participated in this study, all of whom were students at Polytechnic Institute of Castelo Branco in Portugal. They are 2nd year undergraduate Chinese students (N=19) and 2nd year undergraduate Portuguese students (N=13), attending courses in the area of teaching education.

The totality of the individuals (100%) are aged between 19 to 22. Regarding the gender, 78.1% (N=25) is feminine and only 21.9% (N=7) are masculine. The distribution by gender and age is similar in the group of Portuguese and Chinese students.

5.2. Instruments

5.2.1. Questionnaire Life Projects and Valuation of Academic Education in Young People in Higher Education

This instrument was conceived by the researcher for the accomplishment of the present study and has as objective the identification of the following parameters:

- valorization of academic training;
- aspirations to continue studies at master's and/or doctoral level;
- underlying motivations to continue their studies;
- countries where they would like to perform their professional activity;
- professional functions; they would like to perform.

The questionnaire presents eight questions, the first three of which are related to the identification of sociodemographic data. The question about the valorization of the academic formation present a Likert scale of four points - Nothing Important (1) to Very Important (4); the others are multiple choice or open answer.

5.2.2. SWLS - Satisfaction with Life Scale (Pavot & Diener, 1993)

Life satisfaction refers to a cognitive judgmental process. Shin and Johnson (1978) define life satisfaction as a “global assessment of a person’s quality of life according to his chosen criteria” (p. 478). It is important to point out that the judgment of how satisfied people are with their present life is based on a comparison with a standard which each individual sets for him or herself; it is not externally impose (Diener; Emmons; Larsen & Griffin, 1985).

The SWLS items are global rather than specific in nature, allowing respondents to weigh domains of their lives in terms of their own values, in arriving at a global judgment of life satisfaction (Pavot & Diener, 1993).

5.2.3. SHS-Subjective Happiness Scale (Lyubomirsky & Lepper, 1999)

The scale used in this study is organised as a general measuring tool for the variable which comprises four items of self-assessment. According to Sandvik, Diener & Seidlitz (1993), self-assessment tools have demonstrated their effectiveness as the results obtained with their application are convergent with those obtained with other types of evaluation which include, namely, statements from family and friends.

5.2.4. Locus of Control Scale (Levenson, 1974)

For the evaluation of the *Locus of Control* the decision to use the Levensen Scale was taken for the simple fact that this tool allows an analysis of its three dimensions: Internal Control, External Control and Chance Control. According to Levenson (1974), the division of the Scale into three dimensions is justified by the difference which exists between behaviour and cognition of the individual who believes that his or her life is controlled by chance or luck and believes that his or her life path depends on the control of powerful people. In our perspective, being it the “luck or chance” control, being it “power” control, both integrate into the dimension of the *external locus of control* having however different implications in the way individuals relate to the world. In this sense, it is considered that the Levenson Scale allows a more adequate analysis of the construct of the Scale created by Rotter.

This Scale is composed of 24 items distributed in the following manner:

- a. Internal Control: items 2, 3, 20, 21, 22, 23, 25, 32;
- b. External Control: items 7, 16, 26, 27, 28, 29, 30, 31;
- c. Chance Control: items 1, 4, 5, 6, 8, 9, 10, 11

5.3. Procedures

The evaluation of the individuals is done by applying collective tool abiding by a pre-established order:

- a) Identification details (Gender, age, course);
- b) Questionnaire Life Projects and Valuation of Academic Education in Young People in Higher Education;
- c) Satisfaction with Life Scale;
- d) Subjective Happiness Scale;
- e) Locus of Control Scale.

The analysis of the descriptive, correlational and inferential statistics results was done using an SPSS Program. For the later results the significance level was 5%.

6. Findings

6.1. Projects of Future and Valuation of Academic Education

According to the data presented in Table 1, 84.6% of Portuguese students believe that academic training is very important for their life projects and 7.7% think it is important, so that all of the respondents positively value this dimension.

In the sample of Chinese students, 68.4% are located in the point of scale corresponding to "very important" 26.3% in the "important" and 5.3% (N = 1) "not very important". We can reasonably say that Portuguese students value academic education more, although the percentage differences found do not show relevant differences.

Table 01. Valuation of Academic Education

Nationality			Frequency	Percent	Valid Percent	Cumulative Percent
Portuguese	Valid	3	1	7,7	8,3	8,3
		4	11	84,6	91,7	100,0
		Total	12	92,3	100,0	
	Missing	System	1	7,7		
	Total		13	100,0		
Chinese	Valid	2	1	5,3	5,3	5,3
		3	5	26,3	26,3	31,6
		4	13	68,4	68,4	100,0
		Total	19	100,0	100,0	

Regarding the intention to continue studies at master's or doctoral level, we can see that 84.6% of the Portuguese and 94.7% of the Chinese intend to obtain a master's degree; 15.4% (N = 2) of the Portuguese and 5.3% of the Chinese (N = 1) express their intention to continue for a PhD.

Table 02. Projects for academic qualifications

Nacionality			Frequency	Percent	Valid Percent	Cumulative Percent
Portuguese	Valid	Master	11	84,6	84,6	84,6
		Doctorate	2	15,4	15,4	100,0
		Total	13	100,0	100,0	
Chinese	Valid	Master	18	94,7	94,7	94,7
		Doctorate	1	5,3	5,3	100,0
		Total	19	100,0	100,0	

In response to the question "Do you think that qualifications will allow ..." 38.5% of the Portuguese and 63.2% of the Chinese indicate the option "A qualified job", 69.2% of the Portuguese and 42.1% of the Chinese registered "Professional achievement" and 76, 9% of the Portuguese and 47.4% of the Chinese "Personal Achievement".

According to these results, the Portuguese indicate that they value more professional and personal achievement, while the Chinese focus most of their choices on the possibility of having a qualified job. The options "Develop entrepreneurship and proactivity skills" and "To assume civic attitude and active citizenship" collect a residual percentage of choices in Portuguese students (7.7%) but collect a higher percentage in the sample of Chinese students 26.3% and 15.8% respectively.

Even if the data are insufficient, both with regard to the number of subjects and the differences found between the two groups, we proceed with the hypothesis that the Portuguese young people assign an

important meaning to the realization as individuals; in turn, Chinese students value more the possibility of obtaining a qualified job and attribute a meaning to transversal competences of social and civic intervention.

Regarding the options about the country (ies) where they would like to prosecute their professional activity, the totality of the Portuguese intends to stay in Portugal however one student also points out the possibility of Spain, and another one the possibility “Macau, China”.

The large majority of Chinese students indicated the option “China” but two intend to stay in Portugal, one intends to work in the USA, one in Australia and another in Taiwan.

Concerning the professions they would like to pursue throughout their lives, almost all of them refer professions in the area of education (teacher, kindergarten teacher, special education teacher) which is in accordance with the courses they attend. A Portuguese student also notes "veterinary", another “psychologist”. In turn, a Chinese student also points out "businessman"; another "translator". In the whole sample, only one Chinese student points out as the only "singer" option.

6.2. Satisfaction with Life and Subjective Happiness

The table below present the results obtained by the individuals in our sample with the *satisfaction with life* and *subjective happiness* variables.

Table 03. Results in variables “satisfaction with life” and “subjective happiness”

		N	Mean	Std. Deviation
Satisfaction with Life (SWL)	Portuguese students	13	26,000	3,807
	Chinese students	19	25,333	4,041
Subjective Happiness (SHS)	Portuguese students	13	17,923	4,310
	Chinese students	19	18,473	3,255

The table is organized to identify the findings for each of the groups which were compared: Portuguese and Chinese students.

Generally the results are similar in the two groups but the Chinese students obtain a slightly higher average on the SHS scale and Portuguese students indicate slightly higher levels on the SWL scale.

It is possible to state that, both the average or the standard deviation obtained for each of the groups are relatively close, with a value which is slightly higher in the variable “satisfaction with life” in Portuguese’s students and on “subjective happiness” in Chinese’s students. The discrepancy found in the averages of the two scales can be explained, in part, by the fact that the SWLS is composed of five items (maximum of 35 points) and the SHS composed of only four (maximum of 28 points).

Despite the differences found to be residual, the fact that Chinese students present a slightly higher average in the SHS scale and lower in the SWL scale can be understood by the fact that happiness is a wide and deeper construct that despite integrating the dimension of satisfaction with life involves positive emotions and the absence of negative emotions (Ryan and Deci, 2001).

The results obtained in SWLS are very similar to those found in other studies, namely those done with young students in the USA (Pavot et al. 1991; Frisch, 1991; Smead, 1991; Pavot & Diener, 1993) and older American adults (Pavot et al, 1991); young students in Portugal (Pereira, 2013), young students in China (Shek; Yu; Wu; & Chan(2017) and, according to the authors of the scale, slightly above the level of “slightly satisfied”.

6.3. Locus of Control

The Table 4 presents the results obtained with the *Locus of Control Scale* with the averages obtained in each of the dimensions of this instrument identified, as well as the results obtained in the two groups of students (Portuguese and Chinese).

For each dimension that the lowest value will be “-3” in the case of not agreeing with the statements/items related to each dimension and that the highest “+3” in the case of agreeing with all the statements/items.

Table 04. Results in variable “Locus of Control”

		N	Mean	Std. Deviation
Internal	Portuguese	13	1.1634	.64425
	Chinese	19	1.2171	.85882
External - Chance	Portuguese	13	-.76923	.90836
	Chinese	19	.48684	.65998
External - Power	Portuguese	13	-.73077	.77702
	Chinese	19	.37500	.85187

As we can see, the highest average was obtained in the dimension *Internal Locus of Control*, with an average very close in the two groups: 1.21 in Chinese students and an average of 1.16 in Portuguese students. In turn, it was the *External Locus of Control- Chance* which took on the lowest average (-.769) corresponding to Portuguese students’ group. Curiously, the Portuguese students evaluated the influence of the dimensions “luck/chance” and “power” in a negative direction and the Chinese students in a positive way, even with low positive values. In this sense, it is possible to identify a differentiated profile in the Chinese and Portuguese students regarding the influence of the locus of external control in their lives.

6.4. Relationships between the variables “Locus of Control”, “Satisfaction with Live” and “Subjective Happiness”

In order to answer the study objective “Identify and analyze the relationships between the variables Locus of Control, Satisfaction with Life and Subjective Happiness in the two groups of our sample” and taking into consideration the discrepancy between some of the results found in the two groups of students, it was decided to perform an analysis of the correlation using the Pearson Test, which results are presented in the following table:

Table 05. Correlations

Nationality			EMCL - Internal	EMCL- Luck	SWLS	SHS
Portuguese	SWLS	Pearson Correlation	.280	-.599*	1	.777**
		Sig. (2-tailed)	.354	.030		.002
	SHS	Pearson Correlation	.230	-.418	.777**	1
		Sig. (2-tailed)	.450	.155	.002	
	EMCL- Internal	Pearson Correlation	1	-.105	.280	.230

		Sig. (2-tailed)		.732	.354	.450
	EMCL - Luck	Pearson Correlation	-.105	1	-.599*	-.418
		Sig. (2-tailed)	.732		.030	.155
	EMCL - Power	Pearson Correlation	.022	.178	-.074	-.233
			Sig. (2-tailed)	.944	.561	.810
Chinese	SWLS	Pearson Correlation	.376	-.339	1	.161
			Sig. (2-tailed)	.113	.155	
	SHS	Pearson Correlation	.242	.397	.161	1
			Sig. (2-tailed)	.318	.092	.510
	EMCL - Internal	Pearson Correlation	1	.034	.376	.242
			Sig. (2-tailed)		.889	.113
	EMCL - Luck	Pearson Correlation	.034	1	-.339	.397
			Sig. (2-tailed)	.889		.155
	EMCL - Power	Pearson Correlation	.127	.730**	-.350	.158
			Sig. (2-tailed)	.605	.000	.141

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed)

It is possible to state a positive correlation between the variables "subjective happiness" and "satisfaction with life" in the sample of Portuguese students and between the two dimensions of the locus of external control (luck and power) in Chinese students. In turn, a negative correlation between satisfaction with life and the locus of external control (luck) was identified in Portuguese students.

In the case of the Portuguese sample, these results go in the same sense as other studies (Pereira, 2013; Stocks, April & Nandani 2012; Kulshrestha and Sen (2006) that indicate a negative correlation between external locus of control and subjective happiness or satisfaction with life or a positive correlation between internal locus of control and satisfaction with life.

Even in the absence of correlation, it is interesting to note that Chinese students contradict the results of most of the literature consulted because they present slightly higher levels of subjective happiness and, at the same time, a more external locus of control when compared with the Portuguese students of our sample.

By hypothesis, these results are due to the fact that Chinese students present, in parallel, a level of locus of internal locus of control slightly higher than that of Portuguese students. On the other hand, as previously mentioned, this result can be understood by the fact that happiness is a wide and deeper construct that involves positive emotions and the absence of negative emotions (Ryan and Deci, 2001) which are not directly related to the cognitive assessment that subjects make about the control of their lives.

7. Conclusion

Although this study integrates a convenience sample limited to a small number of Portuguese and Chinese young people it was interesting to note the existence of coincident aspects in the profiles of the two sample groups. The absence of significant differences between Portuguese and Chinese students in the motivational and cognitive variables analyzed seems to corroborate the convergence perspective that suggests that the recent socioeconomics changes in Chinese society and ever-increasing globalization contribute to a gradual convergence of concepts and perspectives with the western culture (Ralston, Gustafson, Cheng & Terpstra, 1993, referred by Stocks, April & Nandani, 2012).

The convergence of profiles cannot be explained by the immersion of the Chinese students in the context of the dominant western culture in Portugal, because when the study was performed the Chinese students attended only five months of the course in Portugal. However, we can hypothesize that on the basis of their motivation to accomplish a period of their academic education in Portugal it is their identification with western cultural aspects that can influence the analyzed cognitive and motivational variables.

It should also be noted that a more detailed analysis of the results shows that there are some differences that can be explained by cultural differences previously mentioned. Although the groups significantly value academic training and the vast majority intends to pursue studies at the master's level, Portuguese young people assign an important meaning to the realization as individuals; in turn, Chinese students also attribute a meaning to transversal competences of social and civic intervention.

This analysis is in line with the view that individualist values are predominant in the eastern cultures and the collectivism values in the western cultures.

Another difference that we highlight is related to the fact that the Portuguese students evaluated the influence of the dimensions "luck/chance" and "power" in a negative direction and the Chinese students in a positive way, even with low positive values. In this sense, it is possible to identify a differentiated profile in the Chinese and Portuguese students regarding the influence of the locus of external control in their lives.

Kulshrestha and Sen (2006) have noted significant negative correlation between locus of control and subjective well-being, which is to say that individuals with an external locus of control are significantly less happy than their internal counterparts.

Interestingly, it was not possible to establish this relationship in our study because despite Chinese students presented higher values in the external locus of control they had higher levels of subjective happiness than the Portuguese students. Perhaps this discrepancy in results can be explained by the fact that Chinese students have a slightly higher level of internal locus of control at the same time, indicating they believe to have some control over the events of their life, although they also value the factors "luck" and "power".

In turn, Spector et al. (2002) note that collectivists culture develop secondary control because they have been socialized to subordinate personal control, rather than the primary control exhibited by individualist cultures.

Rotter (1975) also takes on the critical perspective on the simplification of the locus of control as that fact ended up leading to an abusive association to the internality of positive factors and externality of negative processes. There is opposition to this analysis of the ascertainment that a high index of internality may indicate a distorted view of reality as it leads the subject to believe that they have "absolute" power over events. This "interpretation" reveals incapacity to know and accept personal limitations more than skills to face them.

In this line, we can affirm that the young people in our sample were aware that, although they may have an active role in the construction of their life paths, there are external conditioning factors over which they cannot exercise control. If young Chinese think that the factors "luck" and "power" may be responsible for the events, the same is not true of the young Portuguese in our sample. If we think of the instability and the abrupt and unpredictable changes that characterize contemporary societies, we consider that young people reveal a realistic analysis of the limits of personal control over events.

As a synthesis, the findings point to an analysis that contradicts some of the findings in other comparative studies between eastern and western cultures in the sense that it was possible to identify similarities in the profiles of the subjects of our sample relative to the cognitive and motivational variables evaluated. Agreeing with the premise that culture is instrumental in building the identity of the human being, influencing the way of analyzing and relating to the world, it is necessary and appropriate to investigate how the processes of globalization and the existence of multicultural societies are influencing the shared construction of values, beliefs and attitudes between eastern and western culture, most visible in the young generations.

Although the present study is exploratory in nature due to the small number of subjects involved, it has allowed the identification of some lines of analysis that will be pertinent to consider in future studies. In addition to the influence of the culture on the analyzed variables, it will be important to continue to investigate the profiles of the locus of control in its distribution between the internal locus and the external locus, as well as to clarify the relations between the concepts “subjective happiness” and “quality of life”.

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