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Cultural Intelligence: A Review Perspective for Business Administration

Renata Klafke1*, Claudia Tania Picinin2 and Dan Allen Townsend3

¹Universidadde Federal do Paraná (UFPR), Campus Curitiba, Brazil

²Universidade Tecnológica Federal do Paraná1 (UTFPR), Campus Ponta Grossa, Brazil

³University of Tenesse (UTK), Knoxville, USA

*Corresponding author: Renata Klafke, Universidadde Federal do Paraná (UFPR) – Campus Curitiba, Brazil, Tel: 55-42-99821-7475; E-mail: nena.klafke@gmail.com

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Abstract

This work aims to review the existing publications on cultural intelligence (CQ), presenting what has been discussed and discovered on the subject, the measurements as well as the methods to improve it. A business conceptual framework for the business field is suggested which provides a basis for theory development and debate. Finally, some insights will be highlighted, which can propel the readers into future research. A search was performed on papers selected from the Science Direct database, which houses the empirical studies in the business management field. Sixteen articles were studied in detail. The relationships between skills of using CQ with expatriation or international cultural adjustment were found to be the most investigated themes in the business arena. Most of them revealed the existence of a positive association between the expatriate performance and cross-cultural adaptation. The most used instrument used to measure CQ was the CQ Scale, a scale with psychological origins. No scale was developed or found from the business area. From the literature review an initial framework is suggested for the business environment.

Keywords: Cultural intelligence; Business administration; Multicultural contexts

Introduction

Just like a scientific discovery catches the attention of an entire community, Cultural Intelligence (CQ) is a current hot topic, although the term was coined in 2002. Still, the scholars increasingly want to publish some empirical discovery, whether a measuring instrument or a different theory on the subject. After all, is it not one of the reasons for the development of science? 'Add a brick to the wall' of knowledge? And this work, therefore, will be in a similar vein. The idea of writing a bibliographic review work is because a significant number of people (especially business academics) know very little about the topic. In informal and exploratory conversations on the subject, we noticed that many people are unaware of it, whereas others confuse it with social and emotional intelligence, referring to psychology. Not surprisingly, both social and emotional intelligence were 'discovered' by psychologists. To familiarize readers with this subject, a brief presentation on the concepts of cultural intelligence, social intelligence and emotional intelligence is presented.

Social intelligence (SQ) was introduced in the early twentieth century by Thorndike, whereas emotional intelligence (EQ) came into existence in the 1990s, courtesy of Goleman. However, there is no doubt that these concepts intertwine. Gardner explained that his concept of 'multiple intelligences' comes from both the intrapersonal (emotional) and interpersonal (social) intelligences. Peter Salovey and John Mayer saw emotional intelligence as a part of social intelligence. Therefore, it is only a development conducted by Goleman. It must not be forgotten, that CQ involves cross-cultural communication effectiveness and has its origins in interpreting and applying the seminal but controversial work by Hofstede, which is used to understand the differences in culture across countries and also to

explain how business is conducted across different cultures [1]. By reading the works of the abovementioned authors, it can be said that social intelligence is considered as the ability to understand and deal with people. Emotional intelligence, on the other hand, is a subset of social intelligence, yet its ability is revealed by one's ability to monitor one's own actions as well as that of others'. This makes these readings a quick interpretation to guide one's thoughts and attitudes. Both intelligences have a strong cognitive aspect, i.e., the perception and knowledge [2]. In management, one might think that CQ is the ability that a person (e.g., a manager) possesses in recognizing and treating the emotions of his colleagues and subordinates. Individuals with a high level of emotional intelligence are more empathic and less defensive; they can monitor both their own sensations as well as those of others. In relation to cultural intelligence, the objective of this study, it refers to the ability of an individual to adapt to a new cultural context, making him/her capable of managing people with different cultural origins [2,3]. CQ should not be confused with cultural competence. According to these same authors, it does not emphasize the mere understanding of different cultures in the cognitive and behavioral facets but helps in the resolution of problems and effective adaptations to various cultural configurations. For the management area/subject, understanding these intelligences and how they can influence work and interpersonal relationships as well as the relation between subordinate vs. managerial relationship can be a source of competitive advantage. To emphasize that cultural intelligence is increasingly necessary in organizations due to globalization, digital era and international business, this paper presents empirical research and other insights on the subject. Because this article is targeted, but not limited to, academics and managers, it only includes the analysis of research published in management journals, which are aligned with the faculty of this social science.

The concepts adapted from the social sciences cannot be underestimated. One of the most important developments in working

with dysfunctional systems is the Family Systems Theory by Harry Bowen. It has been adopted by and adapted to analyze the systems in which individuals and businesses operate. They do not operate in a vacuum, although management quite often does not even consider the influences of culture, religion, government, or the version of English used within a particular country where the same words have different meanings almost as if you have fallen down the rabbit hole in to Alice in Wonderland.

Other aspects that highlight the difference between this study and other published studies so far are as follows:

- 1) The database choice: Science Direct. It is Elsevier's premier information solution for researchers, teachers, students, health professionals and professionals. Additionally, there are a growing number of open access journals available at no cost, which facilitates the access to quality education and information.
- 2) Most of the review articles have a more 'broad' and interrelated approach, but sometimes they confuse academics because of the several ideas and concepts that are debated simultaneously.

This review is structured in three sections: The first part (2) clarifies the methodology used to select the texts, the second (3) presents the analysis of the selected reviews as well as some keys facts about CQ that were chosen from the selected articles; the third part (4) suggests a conceptual framework directed to the business administration and lastly (5) brings the final considerations with some perceived insights throughout the readings.

Methodology

This research is classified as qualitative and a documentary search. It has an exploratory approach regarding its objective and its technical procedure is a survey. The articles derived from the Science Direct database were searched in the beginning of January 2018. The articles should summaries evidence from the literature that fits this study's context, which involved cognitive competences and CQ development. The period chosen was from 2010 to 2015, because although the CQ has been studied since the early 2000s, the concept has been only widely approached and empirically disseminated since 2010 [4,5]. The criteria used for this survey was determined as follows: In the https:// www.sciencedirect.com/science/search website, the tab Journal was selected as the search feature.

In the Search for field, the word Cultural Intelligence was added as a keyword. Later, the option Article Title, Abstract, Keywords was selected. According to the previously established criteria, a date range of 2010-2015 was chosen. In the REFINE YOUR SEARCH, the option Business, Management and Accounting was chosen. After all these steps, 27 articles were found in the database. After screening these articles, depending on their title and abstract, the authors identified that 11 were misaligned with the theme. So, in the end, 16 articles satisfied this study's criterion. Table 1 shows the resulting number of items found in each step of the survey.

Stage of the Research	No. of Studies
No. of Articles found	27
No. of articles – misaligned with the theme	11

Table 1: Number of the articles found in each research stage.

Discussion of the Literature

This section presents and discusses the cases found in Science Direct database from 2010 to 2015 to achieve this paper's purpose. As this is a review research, we did not seek to present the detailed concepts such as the CQ's origin or the detail regarding the data collection instruments. Therefore, for a better understanding, the reader is encouraged to read the case of his/her interest in whole. This will make it possible to further explain some theories as well as identify the references.

After applying the method presented in the methodology section, 27 articles were found. For the analysis, the authors read all the articles with the objective to select only pertinent texts this study's topic as well as to arrange them in a chronological order, so that the historical evolution of the subject could be followed, that is, which variables and relationships were being studied in each year. Thus, it was found that 16 articles from the Science Direct database were within the scope of the proposed revision. Table 2 shows the number of articles published annually along with their authors.

Year of Publication	Title	
2010	3 Articles Imai and Gelfang [6]; Gertsen and Søderberg [7]; Patagundi and Prasad [8]	
2011	2 Articles Fischer [9]; Chen and Sawangpattanakul [10]	
2012	5 Articles MacNab and Worthley [11]; Chua et al. [12]; Zander et al. [13]; Harrison [14]; Lin et al. [15]	
2013	1 Article Malek and Budhwar	
2014	5 Articles	
2015	0	

Table 2: Year of publication and the authors' name.

As observed, 2012 and 2014 were the years where more articles about CQ were published in the selected database as compared to the other years. We credited two factors that might have increased people's interest in this type of issue in 2012: Bin Laden's death and the Arab Spring - a movement that began in Tunisia and spread to Egypt, where the population wanted to remove the then President Hosni Mubarak (Egypt) from the government. Also, in Libya, the government of Muammar Kadafi collapsed. From 2013 to 2014 two major events (media exposure) occurred that are also strongly related to culture (and perhaps cultural shock) and globalization: The Boston Marathon (Islamic extremism) bombing and the endless conflict in the Middle East, especially in Syria [6-16].

It is also important to note that in 2014 an article published in Science Direct proposed that international managers should be 'transformed' into diplomat executives, who can pass through the complex economic, political and cultural environments, to defuse conflicts. However, we do not consider this text because it does not focus on CQ, but rather on the relationship among companies coping with global complexity, such as supporting local communities and public affairs [17].

Why comprehend CQ in the business arena?

We know that the world is getting smaller and smaller in size, where the size is not only about geographical space but also about the distances that are reduced by globalization.

After the era of practically exclusive commercialization with partners with similar culture or language, the business environment became global, with a constant search for places with a powerful target audience, or even better production factors, giving greater competitiveness to organizations.

With these changes, the leaders of different cultures need to work together, and businesses need people who can move in the cultural sphere naturally, communicate effectively, avoid cultural judgments, and not simply read about countries and how to behave in their interactions with other countries [18]. This entire process can be perceived as challenging, inspiring and enriching and the people involved in this process have a high CQ.

CQ differs from EQ in the easy transit it has in meta-cognitions, that is, it guides the moment and how to use specific strategies to learn or solve intercultural problems [3]. But what are the problems, especially in the business arena, that we can find in another cultural environment? We selected some studies that most clearly showed this problem and relation, which are presented below in Table 3:

No	Authors	Year of Publication	Title
1	Patagundo and Prasad [8]	2010	Does National Culture affect the content of managing?
2	Zander et al. [13]	2012	Leading Global teams
3	Chen et al. [10]	2012	The relationship between cultural intelligence and performance with the mediating effect of culture shock: A case from Philippine labourers in Taiwan

Table 3: Relation between CQ and management in intercultural environments.

The first two authors wrote an interesting review based on two books on national (non-organizational) culture. Paradoxes of Culture and Globalization [4]. Cultural Intelligence, second ed. Berrett-Koehler Publishers, San Francisco. The author's first question arises when he challenges an affirmation of a significant writer on strategy: Mintszberg: Mintzberg as he argues that national culture has little or no effect on the content of managing. The authors make such an analysis in accordance to Martin Gannon's idea, where the concept of culture has its origins in the Latin culture and later in the field of product marketing, where products can connect to culture versus culture free-based [8].

The Cultural Intelligence book by Thomas and Inkson ends up being a tool aiming to increase an individual's social skills and making him/her interact more naturally in different cultural environments. Although Patagundo and Prasad wrote a short review article, synthesizing what each chapter addresses, it instigates us to read these works in full [4,8].

The second article from the above table reflects on the challenges of leading multicultural teams. Although 'Leadership and Team Management' is easily found in the literature [13,19,20] Maznevski, the authors Zander et al. explained the difficulty of knowing each other and how do they relate to intercultural work, which is impossible for any manager to know everything about different cultures and ethnic

The importance of studying CQ and leadership in multicultural teams, it is known that a good communication and leadership process can influence the performance outcomes and integration of multinational teams in Zander et al. [13], international assignment effectiveness, expatriate adjustment and performance and task performance in culturally diverse settings. These factors are relevant for success as a global team leader [3,13,20].

The third article in Table 3 explores how CQ can influence workers in foreign countries, having culture shock as the mediator. Only this article presents the relationship between CQ and cultural shock. The approximation of individuals with different cultures, to a greater or lesser degree, causes 'cultural shock', which is understood as an anxiety or disorientation that a person feels when acting within a culture different from his own. Thus, for an effective and successful adjustment, the technical and personal skills of the employees dealing with the external market need to be reviewed or developed. So, our next sub-section, discusses some tools taken from the literature.

How can CQ be measured?

In all the studies that were examined, where the CQ level measurement was required, the CQS (Cultural Intelligence Scale) instrument developed by Ang et al. was adopted. The CQS primarily measures four dimensions of CQ: metacognitive, cognitive, motivational, and behavioral. Therefore, we perceived that the scientific community validates and accepts such an instrument as a reference in the CQ measurement [3].

Other tests, for measuring other variables and characteristics, whether social or personality, were also used by most of the authors of the 16 papers analyzed (some studies used interviews, whereas others did not aim to measure or relate variables). The scheme below presents the most detailed tests in the selected articles for this review (Table 4).

Multicultural Personality Questionnaire - MPQ (2001)	Cross Cultural Adaptation Scale (1988/1989)	Cognitive ability – Wonderlic Personnel
It measures five main personality traits: emotional stability, social initiative, open-mindedness, cultural empathy and flexibility. The scale shows high reliability (Cronbach's alpha between 0.81 and 0.91). Authors: Fischer [9]; Huff et al. [21]	work, interaction and general adaptation. Authors:	

Table 4: Relation between Multicultural Personality Questionnaire, Cross Cultural Adaptation Scale, Cognitive ability-Wonderlic Personnel.

Most of the researchers used self-report data and a quantitative approach was used for the case analysis. The control variables, in most of them, were gender, age, overseas experience and language ability [6,9,15,16,21].

Researchers who use self-report data are relying on the honesty of their respondents. The degree to which this is a problem will undoubtedly vary with the topic studied [20]. Another limitation to behavioral questionnaires is the common method bias (CMB), a problem that was recognized and mentioned in some CQ studies [16,22]. Method biases are a problem because they are one of the main sources of measurement error [23].

All instruments used in the surveys have their origins grounded in the psychology. Self-report data and CMB seem to be a problem, especially because the evaluation and analysis in the business studies of behavioral questionnaires are generally made by non-psychologists, that may not have the appropriate knowledge to assure the correct questions and then the appropriate analysis of the item. Also, questionnaires elaborated by psychologists (or for any other specific knowledge area) are liable to bias and misinterpretation.

According to Babin et al., business literature shows a trend toward increasing numbers of formative measurement operationalization. They even stress that some academics criticize reflective things that should be formative and effective. Reviewing the literature about the subject, no instrument combining psychological features with business indicators was found. So, it is argued that a more positivist CQ instrument should be developed with more objective variables in order to effective measure organizations 'results and CQ at the same time, for example. Such variables could be chosen from scholars' common knowledge, like market share, sales revenue, net profit margin, customer loyalty, ROI among others. It is not being said, that a new instrument is more reliable or valid than existing instruments. Rather, improvements serve to expose measures that have been omitted from the actual surveys.

How to become more intelligent culturally?

References cited in this section are available in the main study selected for the review. MacNab and Worthley are the scholars that were most interested in theorizing, substantiating or modeling the CQ. However, little was being investigated over the development of this ability, that is, how to become more effective in cultural intelligence (e.g., through personal attributes and experiences). Thus, their work explains the importance of CQ in the globalized era, in which people from different countries interact all the time, whether professionally or not [11].

The theoretical framework begins with the conceptualization of CQ as per renowned authors on the subject, such as Ng and Earley, Brislin et al., Earley and Ang, Earley and Peterson and Ang, Van Dyne, Koh and Ng. Later, CQ education is approached, with the objective to improve the inter-cultural capabilities of individuals or groups, allowing more effective interaction in a variety of cultural settings. Finally, the authors conduct a bibliographic review on self-efficacy, previous experience and CQ's educational outcomes [2,3].

This review paper presents the results of a self-efficacy study, which is linked to cultural intelligence training outcomes [11]. Cultural intelligence development is the judgment of one's ability to accomplish a certain level of performance.

Thus, to strengthen the session in relation to CQ learning, MacNab and Worthley bring to light Kolb's Experiential Learning Theory, where learning is facilitated by experiences with previous support. It also supports that learning is a process potentially influenced by a range of individual attributes and that experiences are a part of this influence. Throughout the paper, the authors confirm that the CQ development is strongly related to a person's 'will/desire', that is, the general self-efficacy will be positively related to the CQ participant's learning indicators. In short, the consistency and strength of this finding suggests that self-efficacy is an important feature of CQ education and development efforts. It is interesting that scholars have attached data collection instruments, which can be replicated, since they are already scientifically certified and accepted in the academic community [11].

Insights from this review study

Two themes were the most reported in the database chosen for this review: the expatriation and the CQ relationship with personality and/or EQ. Table 5 presents the themes studied by the number of papers in relation to the authors.

Theme	Author
CQ x Negotiation	Imai e Gelfang [6]
Expatriation	Gertsen and Søderberg [7]; Malek and Budhwar [16]; Koveshnikov et al. [24]
CQ x Management	Patagundi and Prasad [8];
Cross Cultural Training	Fischer [9]
Predictors of CQ	MacNab and Worthley [11]
Culture x Metacognition	Chua et al. [12]
Global Leadership	Zander et al. [13]

Personlaity Traits/EQ x Intercultural Interaction/adjustment	Harrison [14]; Lin et al.; Sahin et al.; Huff et al. [21]; Gunkel et al. [25]
Culture x Stereotyping	Buchtel [16]
CQ x Cultural Shock	Chen et al. [10]

Table 5: Themes involving CQ topics and their respective authors.

CQ has been conceptualized as the individual's ability to adapt effectively to new cultures, and this adaptation may depend on the personality. Changing the environment might bring anxiety. According to Brown, a key generator of anxiety, in any person, is the perception of either too much closeness or too great a distance in a relationship. The degree of anxiety will be determined by the current levels of external stress (that happen in expatriation) and the sensitivities to particular themes that have been transmitted down the generations (state of mind). So, it is not completely wrong to infer that some professionals might not only need training, but therapy, as proposed by Bowen Therapy System [6,11,15,16,21,22,24-26].

Bowen's training called 'coaching' describes the work of the therapist giving input and support for adult clients who are attempting to develop greater differentiation in their families of origin and established prejudices or patterns [27].

The literature on CQ is still insipient and fails to clearly state the variables influencing (predictors) of CQ. In this aspect, this work aims to identify the variables related to the development of this ability [21]. Lin, Chen e Song studied the effects of CQ adaptation and emotional intelligence. In a study with 295 university students, CQ was positively influenced by variables such as gender, age, previous experiences, English language ability (considering that the study was done with non-english speakers students) and language ability of the host country. This factor is of fundamental importance, since cultural interactions resulting from work, study, economy, politics or even tourism are frequently increasing [15].

The relationship between skills of using CQ (or perhaps a higher CQ level) with expatriation or international cultural adjustment were the most investigated themes. Most of them revealed the existence of a positive association between the expatriate performance and crosscultural adaptation, which is listed as follows:

- CQ is positively related to intercultural adjustment.
- EQ positively modifies the relationship between CQ and crosscultural adjustment. Specifically, the higher the EI, the stronger the effects of CQ in cross-cultural adjustment.

These results, in a way, were already expected, because they are positive qualities that influence each other. Also, since they are social skills, the greater the positive behavior you have in relation to something, the easier it will be to adapt it. In this respect, it would be interesting to investigate why some individuals, with the same experiences or linguistic ability as others (e.g., twin siblings who were born and raised in another country), have significant differences in CQ

Considering the individual cultural skills, only 1 paper developed the cross-cultural interaction through a digital interface. The article was given in the model of a bibliographic review study, without a specific methodology [13]. The bibliographical review of the authors made it possible to create a chart, whose objective was to point out three emerging themes that are highly relevant for future research on leading global teams: (1) global team leaders, boundary spanners, bridge makers, and blenders, people-oriented leadership in global teams and (3) leveraging global team diversity.

In relation to international training methods, Fischer explained, in details, some methods of international training [9]. The two methods that were most commonly found in the literature included: BAFA BAFA and Excel. BAFA BAFA is an intercultural simulation game that aims to increase the intercultural awareness and adaptability to new cultural environments [9]. It basically teaches how to behave in international environments, including complex values, behavioral norms and communication styles. According to Ang et al. this dimension is classified as knowledge of CQ [3]. Some authors suggested that the 'how to' way in international training is insufficient, and to say that the person is fit to be placed or to act in a cultural environment after this type of intervention is insufficient.

Contrastingly, Excel [9] is a behavior modification training that uses principles of social learning theory for teaching key sociocultural competencies (e.g., expressing disagreement, participating in group discussions, and making contact) that enables newcomers to a culture to obtain access to the cultural context [9]. Intercultural interventions embedded in university courses have some effectiveness in increasing intercultural awareness. In fact, considering a person with a low CQ level, whatever the training might be, in fact, there will be improvement in their intercultural awareness.

Another topic that draws attention to this research's results, and, to a certain extent, strongly related to culture concerns is ethnocentrism. Harrison related ethnocentrism with the interaction between culture and CQ. The model used in this study is the so-called 'Big Five' (otherwise known as the 'Five Factor Model') of personality traits, comprising of the following [14]:

- Conscientiousness personal order, self-discipline, long-term goal setting and diligence.
- Greeableness positive relations with others, altruism, trust and
- Neuroticism proneness to anxiety, impulsiveness, negative emotions or depression.
- Openness comfort with new experiences, interest in aesthetics and positivity towards change.
- Extraversion outgoingness, assertiveness and high levels of personal activity.

Ethnocentrism describes a preference for one's cultural group (the 'in-group') over members of other cultural groups ('out-group's'). Stephan and Stephan (1996 - in Harrison (2012) view this as a natural consequence of a child's upbringing, where he/she learns the norms and expectations of his/her culture, which becomes cemented as 'normal' as compared to the alien practices of other cultures. Brewer (2003 - in Harrison, 2012) reiterated ethnocentrism to mean the tendency to perceive the in-group as defining what is positive, correct and good. Although ethnocentrism was introduced by Sumner (1906 in Harrison, 2012) and has its origins in anthropology to illuminate intergroup relations, particularly in non-Western cultures, ethnocentrism itself still presents many challenges and spaces for publications [14].

Another insight that we bring relates to the unedited sample usage for this type of work. While most of the cases were sampled by organizational managers or students, Sahin et al. made use of a very unusual and curious sample for CQ's study: Military (Turkish) on an international mission in Bosnia and Herzegovina in 2011 [22]. It is known that peace missions, especially international missions, expose military personnel to acute stressful situations. Mental problems are the most predictable outcomes in war situations, so military personnel on international peace missions are at a greater risk of developing posttraumatic stress disorder (PTSD) after returning home. More on the subject can be found in the research conducted by Litz et al. and Bartone et al. [28,29].

None of the papers showed a very significant contribution for CQ in the prediction of business skills after controlling cognitive abilities. It raises the question if CQ is really a "quotient" or an outcome of globalization or social relations. Example, Koveshnikov et al. attested other studies when saying that previous expatriation experience is positive and significant in influencing expatriates' cross-cultural adjustments. On the other hand, Porter had already stated in 1991, that whenever an expatriate perceives support from co-workers, it aids the expatriate employee to relate more confidently with co-workers that are nationals of the host country, and so this facilitates not only work adjustment, but job performance in this new environment. So, one might think that CCA doesn't necessarily represent a cognitive ability, but personality trait or language ability could also play an important role, as open-minded people tend to accept new things, like to travel and have the ability of independent living [14,24,30-41].

There is some discontinuous information in the studied CQ literature. For example, contrary to Sahin et al. expectations, the moderating role of personality traits (i.e., extraversion) in the relationship between international assignment and CQ was not confirmed. Their research had divergent findings from Zander et al. even though they manipulated similar variables in similar conditions [13,14].

So, after addressing some overview about the CQ, the study shows that CQ and all the factors related to it, such as cultural competence and successful interpersonal relationship is a subject of great interest and research. Based on the literature review, a synthesis model is suggested allocating some features mentioned to the macro business areas: Leadership and Personal Development, International Business and Marketing. The model has adapted the variables to the business dimensions, although keeping the most common elements identified.

Conceptual Framework

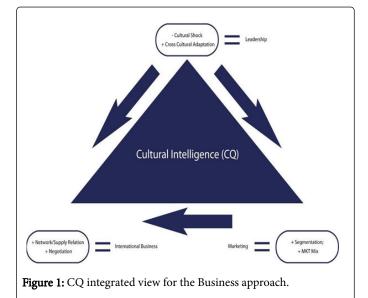
In this section, an initial framework is developed. The framework is mainly based on this review survey and its analysis. The variables chosen are those that indirectly or directly influence the CQ through the business eyes. The main idea of this framework is to focus in the business context. With the results from the literature review an initial model is suggested. We invite researchers to explore and develop our conceptual model further, perhaps adding new variables to each macro variable, or even changing the shape of the model, avoiding dispersion and loss of knowledge. No effort will be made here to exhaustively identify objective issues that business must address. This integrated view of CQ is shown in Figure 1. The positive sign indicates that CQ development has positive effect in business, whereas the negative sign indicates bigger challenges to overcome. The thick arrows represent which macro variable is influencing the other (Figure 1).

CQ could be studied in many business arenas. From the MKT perspective, for example, it could be studied in relation to the Market Analysis, MKT STP (Segmentation, Positioning and Targeting), MKT Mix and its adaptation. To illustrate the importance of the subject in this field, Magnusson et al. suggested that when export managers with higher CQ made marketing-mix adaptations, export performance improved. Also, managers with higher metacognitive CQ were more aware of others' cultural preferences and cultural assumption, which improved sales. The research studied only the United States market, it would be necessary to test their model in other markets/countries to prove its validity. The results would bring a more conclusive analysis and comparison.

From the Leadership perspective, CQ can be studied in regard to the leaders' cognitive abilities or cross-cultural adaptation (as demonstrated in the review above), in that cross-cultural interactions allows people to effectively adapt across cultures and to create empathy [39]. International leaders with higher CQ readily adapt to change and deal with the complexity of interpersonal relationships in order to flourish in an environment of ambiguity comprised of cultural differences in values, beliefs etc. [40].

CQ is related to the international business when it describes the determinants of partnership quality as trust, benefit and risk sharing, business understanding, and commitment, variables that are related to network relations. All of these can significantly impact the success of any international project. The conceptual model elaborated here is not meant to be exhaustive in detailing the variables that may be important in linking CQ with business; this would be logistically as well as cognitively challenging. Nonetheless, the model does capture some categories of variables that have been identified as crucial in explaining variance in firm performance in the strategic management literature.

The model and derived influences can be used to help managers conceptualize the key issues in social/business performance, to systematize thinking about social issues, and to improve planning and diagnosis in the social performance [26,41].



Conclusion and Limitation

Considering that the objective of this work was to review the existing publications on cultural intelligence (CQ), presenting what has been discussed and discovered about the subject, including measurements as well as methods to improve it, the results emphasize CQ influencing variables in marketing, leadership and international business, what contributes to the advancement of research

management and organization with a specific contextual focus on the CQ theory.

In an increasingly globalized scenario, it is natural for organizations to debate about a heatedly theme called Culture. It is noticeable that cultural variables can function both as obstacles and as facilitators in the overall performance of organizations. That being said, we attempted to present CQ, through an objective and succinct article review and from a social sciences' point of view.

It was noticeable that CQ helps us to interpret the world around us, which determines our way of thinking and behaving (cognition and meta-cognition). Flexibility and adaptive power are two key factors for a more effective intercultural relationship.

It was also possible to see that CQ is directly involved with many other factors, such as EQ, personality traits, leadership style, racism, ethnocentrism, resilience and so on. These variables help the positive adaptation abilities of a foreigner in a different cultural environment.

The proposed model requires future fulfillment in other segments and debate. It approaches business elements that are (if so) rarely boarded in the CQ literature. Other connections with other macro variables, such as innovation, could change the shape of the model to a square, for example. Although most of the studies in the Science Direct database relate CQ to expatriation or personality trait, there are still many other opportunities to contribute to the understanding of the CQ in the business field, such as global leadership, international marketing and international politics.

This review did not plan to cover everything about the topic, far from that, but to synthetize important concepts and ideas about the topic. Despite all our efforts, our study suffers from a few notable limitations. First is our literature selection (mainly business) and time range (2010-2015). Important papers were left behind that could broaden the topic. Second, we would suggest the reading of the research of Richard D. Lewis (book "When Cultures Collide") and his subsequent extensive work with "Culture Active Applications and Training" is highly relevant although not supported with empirical publications.

Finally, we would like to call attention to the problem of simplifying theories and results in social sciences. As Tsoukas stresses, reality is too ambiguous, complex, broad, and diverse to be fully perceived, understood, or represented without some level of simplification, like some of the studies investigated do. In closing, every discipline has its own "sacred cows', biases, self-interest as an institution which seeks to maintain its power and dominance in the field.

It is painfully clear that application of Cultural Intelligence must be approached with an open mind and a willingness to adapt and change when the old methods are no longer working. Our hope is that further research as well as encouraging experimentation in finding new solutions to problems which will enable business leaders to effectively carry out the lessons learned from the study of Cultural Intelligence.

References

- Hofstede G (1980) Culture and organizations. Int Stud Manage Organ 10:
- Earley PC, Ang S (2003) Cultural Intelligence: Individual Interactions 2. across Cultures, Stanford University Press, Stanford.
- Ang S, Van Dyne L, Koh C, Ng KY, Templer KJ, et al. (2007) Cultural intelligence: Its measurement and effects on cultural judgment and

- decision making, cultural adaptation and task performance. Manag Organ Rev 3: 335-371.
- Thomas DC, Inkson K (2009) Cultural Intelligence, second ed. Berrett-Koehler Publishers, Inc, San Francisco.
- Livermore D (2011) The cultural intelligence difference: Master the one skill you can't do without in today's global economy. AMACOM Div American Mgmt Assn.
- Imai L, Gelfang MJ (2010) The culturally intelligent negotiator: The impact of cultural intelligence (CQ) on negotiation sequences and outcomes. Organizational Behavior and Human Decision Processes 112:
- Gertsen MC, Søderberg AM (2010) Expatriate stories about cultural encounters-A narrative approach to cultural learning processes in multinational companies. Scandinavian J Manage 26: 248-257.
- Patagundi B, Prasad SB (2010) Does national culture affect the content of managing? International Business Review 19: 315-316.
- Fischer R (2011) Cross-cultural training effects on cultural essentialism beliefs and cultural intelligence. International Journal of Intercultural Relations 35: 767-775.
- Chen ASY, Lin YC, Sawangpattanakul A (2011) The relationship between cultural intelligence and performance with the mediating effect of culture shock: A case from Philippine laborers in Taiwan. Int J Intercultural Relations 35: 246-258.
- Macnab BR, Worthley R (2012) Individual characteristics as predictors of cultural intelligence development: The relevance of self-efficacy. Int J Intercultural Relations 36: 62-71.
- Chua RY, Morris MW, Mor S (2012) Collaborating across cultures: Cultural metacognition and affect-based trust in creative collaboration. Organizational behavior and human decision processes 118: 116-131.
- Zander L, Mockaitis AI, Butler CL (2012) Leading global teams. J World Bus 47: 592-603.
- Harrison N (2012) Investigating the impact of personality and early life experiences on intercultural interaction in internationalised universities. Int J Intercultural Relations 36: 224-237.
- Lin YC, Chen ASY, Song YC (2012) Does your intelligence help to survive in a foreign jungle? The effects of cultural intelligence and emotional intelligence on cross-cultural adjustment. Int J Intercultural Relations 36:
- 16. Malek MA, Budhwar P (2013) Cultural intelligence as a predictor of expatriate adjustment and performance in Malaysia. Journal of World Business 48: 222-231.
- Mirvis PH, Hurley ST, MacArthur A (2014) Transforming executives into corporate diplomats: The power of global pro bono service. Organizational Dynamics 43: 235-245.
- Barakat LL, Lorenz MP, Ramsey JR, Cretoiu SL (2015) Global managers: An analysis of the impact of cultural intelligence on job satisfaction and performance. International Journal of Emerging Markets 10: 781-800.
- Gelfand MJ, Brett JM (2004) The Handbook of Negotiation and Culture, Stanford University Press, Stanford.
- Fan X, Miller BC, Park K, Winward BW, Christensen M, et al. (2006) An exploratory study about inaccuracy and invalidity in adolescent selfreport surveys. Field Methods18: 223-244.
- Huff KC, Song P, Gresch EB (2014) Cultural intelligence, personality, and cross-cultural adjustment: A study of expatriates in Japan. Int J Intercultural Relations 38: 151-157.
- Sahin F, Gurbuz S, Köksal O (2014) Cultural intelligence (CQ) in action: The effects of personality and international assignment on the development of CQ. Int J Intercultural Relations 39: 152-163.
- 23. Podsakoff PM, MacKenzie SB, Lee JY, Podsakoff NP (2003) Common method biases in behavioral research: A critical review of the literature and recommended remedies. J Appl Psychol 88: 879-903.
- Koveshnikov A, Wechtler H, Dejoux C (2014) Cross-cultural adjustment of expatriates: The role of emotional intelligence and gender. J World Bus

- Gunkel M, Schlägel C, Engle RL (2014) Culture's influence on emotional 25. intelligence: An empirical study of nine countries. J Int Manage 20:
- Buchtel EE (2014) Cultural sensitivity or cultural stereotyping? Positive and negative effects of a cultural psychology class. Int J Intercultural Relations 39: 40-52.
- J Framo (1972) Family Interaction: A Dialogue Between Family Researchers and Family Therapists, Springer.
- Bartone PT, Adler AB, Vaitkus MA (1998) Dimensions of psychological stress in peacekeeping operations. Military Medicine 163: 587.
- Litz BT, Orsillo SM, Friedman M, Ehlich P (1997) Posttraumatic stress 29. disorder associated with peacekeeping duty in Somalia for US military personnel. Am J Psychiatry 154: 178.
- Hongyu L (2015) Cross-cultural adjustment factors of chinese expatriates in portugal.
- Tett RP, Burnett DD (2003) A personality trait-based interactionist model of job performance. J Appl Psychol 88: 500.
- Brodowsky GH (1998) The effects of country of design and country of assembly on evaluative beliefs about automobiles and attitudes toward buying them: A comparison between low and high ethnocentric consumers. J Int Consum Market 10: 85-113.
- Croker RA (2009) Qualitative research in Applied Linguistics: A Practical 33. Introduction. Palgrave Macmillan, Great Britain.

- Hammer MR, Gudykunst WB, Wiseman RL (1979) Dimensions of intercultural effectiveness: An exploratory study. Int J Intercultural Relations 2: 382-393.
- Haslberger A (2010) Gender differences in expatriate adjustment. Eur J Int Manage 4: 163-183.
- Hunt GT, Ebeling RE (1983) The impact of a communication intervention on work-unit productivity and employee satisfaction. J Appl Commun
- Petrides KV, Furnham A, Martin GN (2004) Estimates of emotional and 37. psychometric intelligence: Evidence for gender-based stereotypes. J Social Psychol 144: 149-162.
- Rogers CR, Freiberg HJ (1994) Freedom to Learn, third ed. Merrill/ Macmillan, Columbus.
- Thomas DC, Elron E, Stahl G, Ekelund BZ, Ravlin EC, et al. (2008) Cultural intelligence: Domain and assessment. International J Cross-Cultural Manage 8: 123-143.
- Tuleja EA (2014) Developing cultural intelligence for global leadership 40. through mindfulness. J Teaching Int Bus 25: 5-24.
- Tsoukas H (2017) Don't simplify, complexify: From disjunctive to 41. conjunctive theorizing in organization and management studies. J Manage Stud 54: 132-153.