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DEDICATION

To my family and those who have helped me,

especially my guide.

List of papers published in conferences

Gómez Jiménez, Marcos., García, Rafael., Martínez Casanovas, Matilde., Miralles, Francesc (2010). *"Importing innovation practices: challenge for employee creativity behaviour in its national context"*. In Proceedings XXI ISPIM Conference: The Dynamics of Innovation (ISPIM 2010, ISBN 978-952-214-926-8), Bilbao, Spain – 6-9 June 2010.

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Martínez Casanovas, Matilde., Miralles, Francesc., Gómez, Marcos, García, Rafael., (2011). *"Innovation Factory Brainstorming: improving idea generation through experiential learning training"*. In Proceedings XXII ISPIM Conference: Sustainability in Innovation (ISPIM 2011, ISBN 978-952-265-091-7), Hamburg, Germany – 12-15 June 2011.

Martínez Casanovas, Matilde., Miralles, Francesc., Gómez, Marcos, García, Rafael. (2010). "*Improving Creativity Results and its Implementation in Organizations Using Creative Techniques Through Experiential Learning Training*". In

proceedings 5th European Conference on Innovation and Entrepreneurship (ECIE 2010, ISBN 978-1-906638-75-7), Athens, Greece – 16-17 September 2010.

Martínez Casanovas, Matilde., Miralles, Francesc., Gómez, Marcos, García, Rafael. (2010). *"Improving creativity results in organizations using creative techniques through experiential learning training"*. In Proceedings XXI ISPIM Conference: The Dynamics of Innovation (ISPIM 2010, ISBN 978-952-214-926-8), Bilbao, Spain – 6-9 June 2010. *The Conference Best Student Paper Award: Finalist.*

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Abstract

Creativity is considered as a key ingredient of innovation, a highly praised resource for sustainable competitiveness and long term business success. As such, business leaders but also academic researchers and policy makers have paid increased attention to the subject. Creativity research is an ever-growing and multifaceted field of enquiry. Despite a lack of consensus regarding how to define creativity, this field of research has grown over the decades and today it includes a wide variety of approaches from diverse disciplines such as psychology, sociology, anthropology, neurology, economy, among others. The cultural approach to the study of creativity has been relatively understudied. Although there are some theoretical formulations, this stream of research lags behind in terms of empirical research.

The current dissertation addresses the research question in relation to what extent culture affects the creativity of employees at work, that might also be conceptualized as the effect of culture on the knowledge domain of organizational creativity.

This dissertation provides empirical evidence from a sample of 198 employees from 10 Spanish organizations, regarding the relationship between culture and creativity at work. It is maintained that culture has a significant influence on the employee creativity. The effect of culture on employee creativity is examined employing a multidimensional model, of the perceived employee creativity, that takes into account culture's imprints at an individual level of analysis, at three distinct dimensions: national culture,

organizational culture and individual stand-alone values. In this model the employee's creativity is perceived by the employee himself, and also (as a validation point) by the employee's manager.

While most of creativity tools and theories have been developed within an Anglo-Saxon culture, this dissertation is focused on employee creativity in organizations belonging to Spain, a Mediterranean society and a cultural space that is relatively under-examined by previous research.

Among the main contributions, empirical findings suggest a potential different social process of creativity in the organizations under study, and an unexpected different perception of employees' creativity depending on the observation point.

In summary, the purpose of this study is to examine the effect of culture on perceived employees' creativity, at three distinct dimensions: national culture, organizational culture and individual stand-alone values.

Chapter 1 - Introduction

Creativity is an important ingredient for organizational success. Given their need to thrive within a rapidly changing global economy, many organizations are aware of the important role that creativity plays in the process of innovation. As Westwood and Low (2003) put it, due to the rapidly changing marketplace, companies must innovate, not just to growth but also to survive. Creativity is part of the innovation process. Innovations are the practical application of creative ideas, and an organization cannot innovate unless it has the capacity to generate creative ideas. In consequence, creativity becomes important not only for individual and organizational performance, but also for economic success and social development at a societal and global level.

Organizational creativity studies stand that the driving engine of innovation in any organization is its employees, and it is through its employees' creativity that an organization is able to create and produce novel, potentially useful ideas about organizational products, practices, services or procedures (Shalley, Zhou and Oldham, 2004). They represent its creative capital and its most important asset, its arsenal of creative thinkers whose ideas can be turned into valuable products and services (Florida and Goodnight, 2005). As it is creative ideas that turn ordinary companies into market leaders (Pitta, Wood and Franzak, 2008) employees' creativity is an extremely valuable asset for any business organization. In fact, many researchers suggest that enhancing the creative performance of their employees is essential to companies striving to achieve a competitive advantage (Amabile, 1988; Shalley, 1995; Oldham and Cummings, 1996).

Employee creativity (herein after EC) contributes significantly to organizational innovation, effectiveness and survival (Nonaka, 1991; Amabile, 1996). Thus, having employees that are creative in their work is an important condition for firms that are looking to build a solid foundation for organizational creativity and innovation.

According to Shalley and Gilson (2004) the benefits of having creative employees extend beyond the creative ideas that these employees are able to generate to the enhancement of creativity potential of other employees in the firm as well. The ideas generated by creative employees increase the likelihood that other employees will apply the ideas in their own work, further develop the ideas and then transfer them to other individuals in the organization for their own use and development.

The topic of creativity in organizations has received increased attention over the past decades. Researchers in a vast array of scientific disciplines – from psychologists to organizational behaviorists – have examined creativity in working settings and the factors that stimulate or inhibit it (e.g. Zhou, 2003; Amabile et al., 2004; Rodan and Galunic, 2004). The attempts to conceptualize creativity in organizations belong to various person-context theories of creativity that explain creativity as a function of employees' personal characteristics, the characteristics of the context in which they work, and the interactions among these characteristics. Previous research have examined the effect of individual characteristics such as personality, cognitive styles, creativity relevant skills, experience and motivation (e.g. Amabile, 1983, 1996, 2000; Woodman et al., 1993; Scott and Bruce, 1994; Oldham and Cummings, 1996; Mumford

et al., 1997; Reiter-Palmon et al., 1997; Shalley and Oldham, 1997; Tierney, Farmer and Graen, 1999; Vincent, Decker and Mumford, 2002).

Context related factors such as the influence of the work setting and job characteristics, and relationships with coworkers and supervisors (e.g. Amabile and Gryskiewicz, 1989; Hatcher, Ross and Collins, 1989; Oldham and Cummings, 1996; Tierney and Farmer, 2002, 2004; Farmer, Tierney and Kung-McIntire, 2003; Amabile et al., 2004; Amabile and Conti, 1999; Frese et al., 1999; Zhou and George, 2003; Shin and Zhou, 2003) have also been studied.

Whereas personality, cognitive styles, motivation and skills are all important in explaining employee creativity, there are other individual-related factors that may also affect creativity. One example in this sense is the cultural values held by different individuals. By determining patterns of behavior and attitudes towards creativity, cultural values have the potential to affect people's creativity (Fernald, 1987; Kasof et al., 2007). As Rank, Pace and Frese (2004) indicate, cultural values likely influence if and how creativity and innovation are enacted and cultivated. In organizational settings, some empirical research suggests that there is a link between creativity and employees' individual values (e.g. Martinsons, 2004; Miron et al., 2004; Rice, 2006; Kim, 2007; 2009). Nevertheless, these studies lack of the broad view about the effect of culture on employee creativity at societal, organizational and individual dimensions, and in some cases they treat culture as a collateral condition, but not as the core of their studies.

Individual cultural values are dictated by different cultures in which people are born, raised and live. Westwood and Low (2003) make the case that creativity is not only the result of individual traits such as skills, personality, education, cognitive factors or motivation but it also has a social dimension that should be accounted for in research studies. Lubart (1999) also supports the need for a better contextualization of creativity in research studies and points out that different cultures (i.e. Eastern versus Western cultures) view creativity differently and have divergent conceptions for what creativity consists of and its social function. Creativity is generally viewed as a positive construct by nearly all cultures yet variation across cultures can be observed regarding its relative importance, social role and function and forms and domain of relevance. Such variations among cultures with respect to the attitudes towards creativity may also bare an effect on employees' creativity at work.

In the Western world creativity is conceived of as a pragmatic tool to help people in solving problems and implementing solutions. According to this view the creative employee is, as described by Krippner and Arons (1973), predatory, in the sense that he grasps the insight for a specific purpose. A process-oriented rather than a product-oriented creative person would use insight-producing states to obtain enlightenment (Sarasvathy, 2001). According to Lubart (1999) Eastern cultures hold a different view on creativity. While Western cultures are more concerned with the outcome of the creative process – i.e. the creative products –, Eastern cultures place more emphasis on the creative process itself. In these cultures creativity involves a state of personal fulfillment, a connection to a primordial realm, or the expression of an inner essence or

ultimate reality, where creativity is related to meditation because it helps one to see the true nature of the self, an object or an event. Eastern cultures view creation not as newness but as a rediscovery, and the function of creativity is to mining for insights which (re-) reveal the original truth that was temporarily lost from sight: more revelation than originality. The creative person must find ways to access the insight understanding and truth that are already pre-existent but which must be made psychologically manifest through the creative process (Westwood and Low, 2003). Thus, while in the Western view being creative means being able to break with tradition and to move beyond what exists, Eastern cultures view creativity as a re-interpretation of tradition. For example, Kim (2007; 2009) provides an analysis of how a major philosophical and spiritual teaching, e.g. the Confucianism, that deeply affects East Asian cultures, also affects the creativity of people that belong to such cultures (i.e. Korean educators), when creativity is conceptualized according to the Western understanding of the phenomenon.

The differences across cultural settings with respect to the meaning and importance given to creativity indicate a possible link between creative behavior and the context within it manifests. According to some context focused theoretical conceptualizations of creativity – such as the systemic models of creativity or, the cultural psychology of creativity, creative performance is also a function of the cultural setting within which it takes place. A prominent attempt to factor in the environment was made by Csikszentmihalyi (1988, 1999) who proposed a framework for studying creativity that establishes a link between the person (the creative individual with her genetic pool and

personal experience); the field (the social system) and the domain (a system of symbols related to the idea of culture). This framework, as indicated in Montuori and Purser (1995), recognizes the interconnectedness between the self and the environment and attempts to discover relations between them. Building on systemic views of creativity and drawing on cultural psychology, Glăveanu (2010) argues that all major paradigms in creativity theory are highly individualistic in nature and fail to take into account the sociocultural roots and dynamics of all our creative acts. The author proposes a cultural psychology of creativity which takes into account the role of culture in shaping the creative potential of individuals and conceptualizes creativity through a tetrad framework of self-community-new artifact-existing artifacts.

These theoretical approaches were not developed specifically within the organizational creativity domain, but might be helpful to answer our research question focused on employee's creativity at workplace, and so they will be included as a support to this study's purpose.

Such socio-cultural conceptualizations of creativity as described above, suggest that the cultural setting may shape the creative potential of individuals. In other words, creativity and the creative product are not exclusively the result of cognitive and mental processes aided by human interaction and collaboration, but they are also the result of the cultural background of individuals as well as the socio-cultural environment in which they live and create. According to these views there is no real or objective creativity, but one that is constructed within communities (Glăveanu, 2010).

Communities and groups of people share certain patterns of behavior (Useem and Useem, 1963) as well as other symbolic, ideational and intangible aspects of human societies (Banks et al., 2009) defined as culture. Culture may be defined as the collective programming of the mind (Hofstede, 2001). Culture is expressed through its values, symbols, rituals, heroes and practices that distinguish one group of people from another in modernized societies and which are passed on from generation to generation, independently of the biological genes (Parson, 1949).

Thus, it may be the case that, in addition to individual characteristics such as education, cognitive type, personality or motivation, employee creativity is also a function of their cultural identity and the cultural values that they hold. In fact, some research studies suggest a link between organizational culture and employee creativity (Hofstede, 2001; Luthans and Doh, 2012). However, organizational creativity research that examines the effect of culture-related aspects on employees' creativity is relatively scarce (Chua, 2015; Leung, 2010, 2015).

Summing up this introduction:

Previous research has examined the effect of individual characteristics such as personality, cognitive styles, creativity relevant skills, experience and motivation (e.g. Amabile, 1983, 1996, 2000; Woodman et al., 1993; Scott and Bruce, 1994; Oldham and Cummings, 1996; MumFord et al., 1997; Reiter-Palmon et al., 1997; Shalley and Oldham, 1997; Tierney, Farmer and Graen, 1999; Vincent, Decker and MumFord, 2002).

And context related factors such as the influence of the work setting and job characteristics, and relationships with coworkers and supervisors have also been studied (e.g. Amabile and Gryskiewicz, 1989; Hatcher, Ross and Collins, 1989; Oldham and Cummings, 1996; Tierney and Farmer, 2002, 2004; Farmer, Tierney and Kung-McIntire, 2003; Amabile et al., 2004; Amabile and Conti, 1999; Frese et al., 1999; Zhou and George, 2003; Shin and Zhou, 2003).

On the contrary, it is suggested that other individual-related factors that may also affect creativity have been understudied so far (Chua, 2015; Leung, 2010, 2015), as it is the case of the cultural values held by different individuals, what have the potential to affect people's creativity, by determining patterns of behavior and attitudes towards creativity. What's more, among the scarcity of studies on the topic, most of them come from a dominant cultural context, the Anglo-Saxon one, specifically from the United States.

Considering the above, the current dissertation addresses the following research question: To what extent does culture affect the creativity of employees at work? The purpose of this study is to examine the effect of culture on perceived employees' creativity. Drawing on Glăveanu's (2010) cultural psychology of creativity, employee creativity is hypothesized as being dependent on three sociocultural domains in addition to personal characteristic and workplace specific factors that were previously validated by research as affecting employees' creativity. These sociocultural domains are: 1) the cultural stand-alone values of the individual; 2) the cultural profile of the work

environment (organizational culture) and, 3) the broader cultural profile of the employee's country or society. Within this dissertation we make the distinction between national culture at a broader level, and organizational culture as a subculture affecting the individual at work (and therefore affecting its creative potential as well). But, and this is mandatory to be underlined, all three sociocultural domains will be studied at an individual level of analysis, with the main goal of avoiding the ecological fallacy (or ecological inference fallacy) in the interpretation of statistical data, where inferences about the nature of individuals will be deduced from inference for the group to which those individuals belong. This issue, and how it is managed in this study, will be explained in detail in section 3.1.2.

The rest of the dissertation is organized as follows. In the second chapter it is discussed the main theoretical approaches developed to explain creativity in work settings. Based on this review we set the basis for the conceptual framework for the empirical application. Specifically, we define organizational creativity and explain the main theoretical approaches available for the study of creativity in working settings. Chapter 3 offers a discussion about the role of culture in employee creativity and about how cultural values of different individuals affect their creativity at work. In addition we explain the conceptual model used and we formulate the hypotheses to be tested in the empirical application. In Chapter 4 we explain the empirical method by describing how data has been collected, the instruments employed as well as the measures used and the statistical techniques employed for data analysis. The empirical findings are explained in Chapter 5 and discussed in Chapter 6, suggesting some potential contributions about

1) the possibility of enhancing employee creativity in a high deference to power and risk aversion cultural context, 2) a potential new path for future research to study the purpose of this dissertation from the managers' perception, and 3) the extension of the knowledge about cultural contexts and employee creativity in Spain. Chapter 7 get on the conclusions as well as the main implications of the empirical findings, limitations and directions for future research.

Chapter 2 - Conceptual Framework

2.1. What is organizational creativity?

A defining characteristic of creativity research (and thus, also of organizational creativity research) is its lack of consensus regarding what creativity is. There are an impressive number of theoretical approaches developed to explain the general concept of creativity (Sternberg and Lubart, 1996; 1999; Runco, 2004; Weisberg, 2006; Kozbelt, Beghetto and Runco, 2010; Glăveanu, 2010). Given such abundance of theoretical approaches there are also multiple definitions of creativity. For example, GuilFord (1977) defines creativity as the art of setting problems and finding proper solutions to them. Bertone (1993) considers creativity as the ability of thinking out of scheme, reaching new and functional conclusions, suited to solve a problem or to catch an opportunity. Undoubtedly, the multitude of definitions available is due to the remarkable pluralism which characterizes the field of research in creativity whereby a multitude of theoretical perspectives, with different assumptions and methods, and operating at different levels of analysis, all (ideally) contribute to a more robust – if at times, contestable – understanding of human creativity (Kozbelt, Beghetto and Runco, 2010).

Creativity theories and their corresponding definitions can be categorized by the aspect of creativity they emphasize (Kozbelt et al., 2010; Runco, 2007). As explained in Runco et al. (2010), these aspects refer to process (the steps followed and the nature of the

mental mechanisms that occur when a person is involved in the creative act), product (the result of the creative act such as inventions, publications, patents, works of art, etc.), person (or personality) and place (the setting or climate in which the individual resides).

Within the stream of research on creativity in the workplace (known as organizational creativity), an often cited definition states that creativity is "the production of ideas that are both novel and useful" (Sternberg and Lubart, 1999). Amabile (1996) offers a more elaborate version of the above definition stating that "[a] product or response will be Judged as creative to the extent that (a) it is novel and appropriate, useful, correct or valuable response to the task at hand, and (b) the task is heuristic rather than algorithmic". It can be easily observed in the literature that most organizational creativity researchers subscribe to such product oriented definitions according to which creativity refers to the capacity to produce novel and useful ideas in any domain (Stein, 1974; Woodman, Sawyer and Griffin, 1993). After reviewing seven definitions of creativity given by authors contributing to the 1999 Handbook of Creativity (Sternberg et al., 1999), Mayer (1999) concludes that the overarching definition of creativity seems to favor the idea that creativity involves the creation of new and useful products, including ideas and concrete objects. According to these definitions it follows that: creative people are those who create new and useful products, and creative cognitive processes occur whenever a new and useful product is created.

This approach to defining creativity has been criticized as being restrictive, as it tends to highlight the creative product over other potential bearers of creativity such as the creative person or the creative process (Klausen, 2010). Sternberg and Lubart (1996) draw the attention on the one-dimensional of most theoretical approaches developed to study creativity and argue that such tendency to isolate a single dimension of the topic has had the effect of distorting the findings of research; a single feature (say, cognitive processes) is taken to be the whole of creativity; while other equally important features (say, motivation or cultural context) are ignored.

Feldman (1999) indicates that at least the following dimensions should be captured within the concept of creativity if we are to conceptualize creativity as multidimensional: (1) Cognitive processes; (2) Social/emotional processes; (3) Family aspects: growing up and current; (4) Education and preparation: formal and informal; (5) Characteristics of the domain and field; (6) Social/cultural contextual aspects; (7) Historical forces, events, trends. The author further points out that an adequate analysis of creativity involves (at least) these seven dimensions or aspects; clearly, no single investigator can do more than a fraction of the work necessary to produce an adequate account of all seven dimensions. The scope of creativity research is therefore exceptionally broad and the need for ways to integrate the findings of disparate researchers' work into an overall framework is exceptionally important.

The product orientation characterizing most definitions of creativity in working settings is restrictive, also because it reflects a partial view of creativity, namely the Western

view of creativity (Lubart, 1999). As argued previously in the introductory chapter although creativity is generally viewed as a positive construct in nearly all cultures, there are certain variations across cultures regarding its relative importance, social role and function and, forms and domains of relevance. Western cultures view creativity differently than Eastern cultures (Lubart, 1999; Westwood and Low, 2003). Western cultures' conceptualizations of creativity highlight novelty and usefulness and are focused on the creative product whereas Eastern cultures view creativity as a reinterpretation of tradition being more concerned with the process of such reinterpretation.

Such differences among cultures regarding the conceptualization of creativity suggest that creativity is intimately related to the context within which it manifests. Fischer et al. (2005) point out that "[m]uch human creativity is social, arising from activities that take place in a context in which interaction with other people and the artifacts that embody collective knowledge are essential contributors". Any definition of creativity should take into account the cultural aspect regardless of whether is person, product or process oriented. As Feldman (1974) observes, all creative thought springs from a base of cultural knowledge and is therefore, by definition, part of a cultural tradition – even when it breaks with tradition.

Although they recognize the effect that culture, society and other contextual factors may have on the creative potential of individuals, most organizational creativity theories do not take into account such aspects (e.g. Amabile, 1983, 1988, 1996 and, Woodman et

al., 1993). Nevertheless some definitions that take into consideration the socio-cultural aspect of creativity can be found elsewhere. For example, Gardner (1994) takes into account the role that culture plays in creativity and defines the creative individual as one that solves problems, fashions products, or poses new questions within a domain in a way that is initially considered to be unusual but is eventually accepted within at least one cultural group.

More recently, Glăveanu (2010) proposed a cultural psychological approach to creativity (which will be discussed in more detail later during this chapter) arguing that the creative individual cannot be analyzed separately from his/her environment, as they both are elements of a whole, are interdependent and affect each other. He provides thus a more comprehensive definition of creativity as a complex socio-cultural-psychological process that, through working with culturally-impregnated materials within and intersubjective space, leads to the generation of artifacts that are evaluated as new and significant.

This definition of creativity is more comprehensive than those previously employed by organizational creativity researchers, for at least two reasons. First, and most important, it extends on previous definitional efforts by capturing not only the effect of culture but also by including in the analysis both the individual with his/her creative abilities and skills and the community in which he/she lives and undertakes his/her creative acts. Second, the model highlights the important role played by the relationships developed

between the individual, the community and the broader culture, and how all these three categories participate to the production of new artifacts (creative products).

Considering the above, we find Glăveanu's (2010) definition of creativity as adequate for the purpose of this dissertation which aims to examine the effect of culture and subculture (i.e. organizational culture) on the self-perceived creativity of employees. Thus, in this dissertation creativity is defined as a complex social, cultural and, psychological process that, through working with individual values (as defined by the broader environment such as the national culture) and organizational values (from organizations' environment and culture), leads to the generation of artifacts that are evaluated as novel and significant. Further explanations and details regarding how culture and its components are defined and conceptualized in this thesis will be provided in the following sections of the current chapter.

2.2. Theoretical approaches to employee creativity

As mentioned above there are many different approaches to the study of creativity that have been developed over time. For example, Kozbelt et al. (2010) identify ten distinct categories of theoretical approaches, each category comprising several different theories. The authors point out that the field is remarkable for its pluralism whereby a multitude of theoretical perspectives, with different assumptions and methods, and operating at different levels of analysis, all (ideally) contribute to a more robust − if at

times, contestable – understanding of human creativity. In Table 2.1 a summary of the

main theoretical approaches as identified by these authors is provided. Given the current

study is concerned with creativity in working settings, a detailed description of each

theoretical approach developed over the years to explain creativity goes beyond the

scope of this dissertation and will not be provided here. Instead a description of those

approaches developed specifically to explain organizational and employee creativity

will be provided. However, and for the sake of completion, a summary of the main

theoretical approaches to creativity is provided in the table below.

Table 2.1. Main theoretical approaches to the study of creativity

Approach	Primary Assertion	Primary Focus	Representative studies[*]
Developmental	Creativity develops over time (from potential to achievement); mediated by an interaction of person and environment	Person, Place, Product	Albert and Runco (1999) Helson (1999) Subotnik and Arnold (1996)
Psychometric	Creativity can be measured reliably and validly, differentiating it form related constructs (IQ) and highlighting its domain-specific nature	Product	Wallach and Kogan (1965) GuilFord (1968)
Economic	Creative ideation and behavior is influenced by "market-forces" and cost-benefit analyses	Product, Place and Person	Rubenson and Runco (1992) Sternberg and Lubart (1992, 1995) Florida (2002)
Stage and componential process	Creative expression proceeds through a series of stages or components, the process can have linear and recursive elements	Process	Wallas (1926) Runco and Chand (1995) Amabile (1999)
Cognitive	Ideational thought processes are	Person and Process	Mednick (1962)

Approach	Primary Assertion	Primary Focus	Representative studies[*]
	foundational to creative persons and accomplishments		GuilFord (1968) Finke, Ward and Smith (1992)
Problem-solving and expertise based	Creative solutions to ill-defined problems result from a rational process, which relies on general cognitive processes and domain expertise	Person, Process and Product	Ericsson (1999) Simon (1981, 1989) Weisberg (1999, 2006)
Problem finding	Creative people proactively engage in a subjective and exploratory process of identifying problems to be solved	Process and Person	Getzels and Csikszentmihalyi (1976) Runco (1994)
Evolutionary	Eminent creativity results from the evolutionary-like processes of blind generation and selective retention	Person, Process, Place and Product	Campbell (1960) Simonton (1988, 1997)
Typological	Creators differ along key individual differences, which are related to both macro- and micro-level factors and can be classified via typologies	Person	Galenson (2001, 2006) Kozbelt (2008)
Systems	Creativity results from a complex system interacting and interrelated factors	Varying emphasis across all Ps	Gruber (1981) Csikszentmihalyi (1988) Sawyer (2006)

[*]The studies that initiated one stream of research or those most frequently cited are given as example of representative studies.

Source: Self-devised, adapted from Kozbelt et al (2010)

Looking at the table above one can sense the richness of creativity as research topic. The different perspectives summarized above look at creativity at different levels, from the regular individual to the creative genius (Kozbelt et al., 2010). However, when looking at the creativity of people in working settings (employee creativity), of the ten categories explained above, the stage and componential process category is the one that

is most frequently employed within empirical research on employee creativity and the one that will be discussed in more detail in this chapter. Currently, there are two influential models belonging to this category that are mostly used by empirical research on employee creativity (i.e. Amabile, 1983, 1988, 1996 and, Woodman et al., 1993). These two approaches, as well as other less influential models belonging to the same category, will be explained and discussed in the reminder of this section with the purpose of informing the reader on the approaches used to explain employee creativity, their major advantages and hindrances.

2.2.1. The componential model of creativity

Judging by the frequency of citation, Amabile's (1983, 1988, 1996) componential theory of creativity is one prominent approach to study creativity in working settings. This approach, which was partially based on the componential model of a social psychology of creativity, represented one of the first comprehensive and grounded theories of employee creativity. The theory posits that employee creativity depends on the type and amount of skills one has that are specific to the domain of practice (i.e. domain-relevant skills) along with the type and amount of motivation one has in developing a task, and with the creative process itself (creativity relevant processes). Figure 2.1 explains a graphical representation of this model.

According to Amabile (1983, 1988, 1996), creativity relevant processes have to do with the tacit knowledge to produce creative ideas, and the cognitive styles and work styles for the production of creative ideas, and are likely to be positively affected by the level of training in creative skills and strategies for producing new ideas, by experiences in creative activities and by possessing certain personality characteristics. A key element in this model is Task Motivation, that represent individuals' attitudes toward a task and their perceptions of his or her motivation for working on the task. Generally speaking it is said that an individual's motivation can be intrinsic or extrinsic in nature. Intrinsic motivation is defined as "any motivation that arises from the individual's positive reaction to the qualities of the task itself; this reaction can be experienced as interest, involvement, curiosity, satisfaction, or positive challenge", this kind of motivation is also related to high degrees of achievement (McClelland, 1967). Where extrinsic motivation can be defined as "any motivation that arises from sources outside of the task itself", and its goal is the desire to attain some goal that is apart from the work itself – such as achieving a promised reward or meeting a deadline or winning a competition. Although intrinsic and extrinsic motivation for doing a task may coexist, one is likely to be primary. Intrinsic motivation will be more conducive to creativity than a primarily extrinsic motivation. And finally, domain relevant skills are related with the factual knowledge and expertise in a given domain, that can be affected by formal and informal education, and individuals' perceptual, cognitive and motor abilities.

Figure 2.1a. The componential model of employee creativity
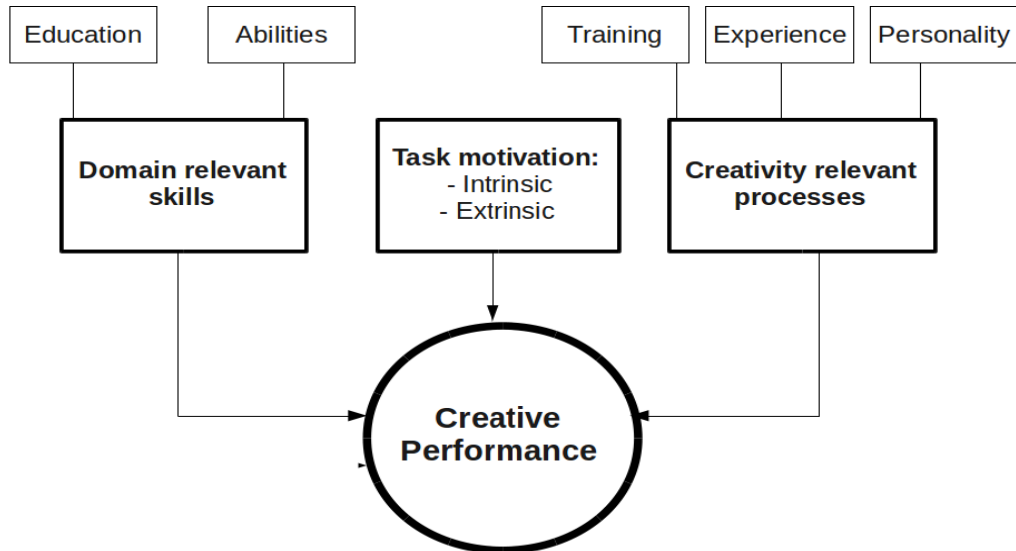
Source: Self-devised, based on Amabile (1988, 1996)

According to Amabile (1983, 1988, 1996), the first component of her model – i.e. domain-relevant skills – depend heavily on the innate abilities and skills they possess whilst domain-relevant processes depend more on training and experience. As for the third component – i.e. task motivation – refer to attitudes toward specific tasks, perceptions of one's motives (Kozbelt et al., 2010).

Although the model has been criticized for not taking into consideration the effect of the broader environment on creativity, Amabile (2012) has recently extended the framework to take into consideration this fourth component of creativity (see figure 2.1b), the social environment in which the individual is working, a component considered as being outside the individual. It is assumed to also affect individual creativity through specific

factors that serve either as obstacles or stimulants to intrinsic motivation and creativity. Potential creativity blockers are norms of harshly criticizing new ideas; political problems within the organization; an emphasis on the status quo; a conservative, low-risk attitude among top management; and excessive time pressure. The social factors assumed to enhance creativity are a sense of positive challenge in the work; work teams that are collaborative, diversely skilled, and idea-focused; freedom in carrying out the work; supervisors who encourage the development of new ideas; to management that supports innovation through a clearly articulated creativity-encouraging vision and through appropriate recognition for creative work; mechanisms for developing new ideas; and norms of actively sharing ideas across the organization.

Figure 2.1b. The componential model of employee creativity (2012 update)
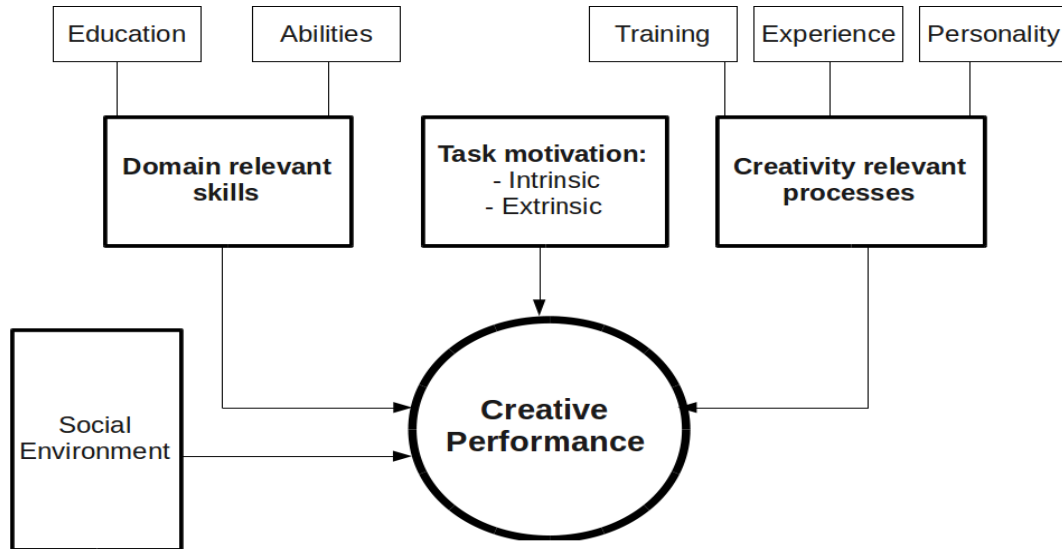
Source: Self devised based on Amabile (2012)

2.2.2. The interactions approach to organizational creativity

The interactions approach, proposed by Woodman, Sawyer and Griffin (1993), is another major theoretical approach to creativity in working settings. The model (explained below in Figure 2.2) is premised on the idea that creativity is an individual level phenomenon that can be affected by both dispositional and situational variables. According to this approach creative performance is more fully predicted by the interaction of individual's disposition and contextual factors. This model explicitly stresses the importance of the interaction between the person and the situation, and is based on the theoretical base of interactional psychology.

Figure 2.2. The interactions approach to creativity in organizations
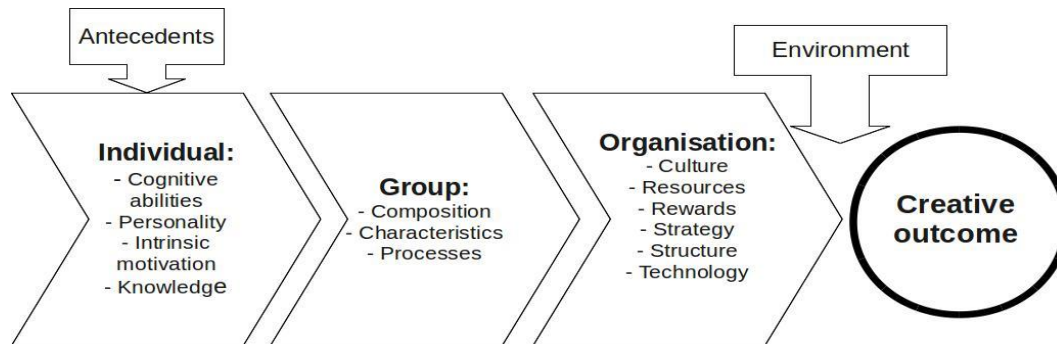
Source: Self-devised, based on Woodman et al. (1993)

As put by the authors themselves, the creative behavior "of organizational participants is a complex person-situation interaction influenced by events of the past as well as salient aspects of the current situation. Within the person, both cognitive (knowledge, cognitive skills, and cognitive style preferences) and non cognitive (e.g., personality) aspects of the mind are related to creative behavior. In sum, individual creativity is a function of antecedent conditions (e.g., past reinforcement history, biographical variables), cognitive style and ability (e.g., divergent thinking, ideational fluency), personality factors (e.g., self-esteem, locus of control), relevant knowledge, motivation, social influences (e.g., social facilitation, social rewards), and contextual influences (e.g., physical environment, task and time constraints)." (Woodman et al., 1993).

The model proposes that creative persons, groups and organization are inputs that are transformed in some way by the creative process and the creative situation, which includes enhancers and constraints for creative activities. The potential outcome of this

transformation of the inputs is a creative product. According the interactions approach, creative performance in organizations is a function of individual, group and organizational characteristics that interact to enhance or constrain creativity. Important individual characteristics proposed by this approach are the cognitive abilities and style, personality, intrinsic motivation and knowledge. The group characteristics discussed includes norms, cohesiveness, size, diversity, roles, task and problem solving approaches. Organizational characteristics such as culture, resources, rewards, strategy, structure and technology are highlighted as factors that have the potential to affect creativity in working settings (Woodman et al., 1993).

2.2.3. Other componential approaches

There are several other intents to the conceptualization of creativity as a stage or componential process. For the sake of completion these approaches are briefly presented in this section. Ford (1996) proposes a theory of individual creative action in multiple social domains, such as group, organizational, institutional and market domains. As described in Zhou and Shalley (2003), according to this theory, creative action by an individual is a result of the joint influence of sense making, motivation, knowledge and ability. Creative and habitual actions are competing behavioral options for an individual. When habitual actions are more attractive, people tend to choose habitual actions over creative ones, even when the context may be favorable for creative action. Thus,

creative actions, even though they are extremely important to organizational success, they will remain as more uncommon instances in organizations.

In a similar fashion, Drazin, Glynn and Kazanjian (1999) propose an approach which attempts to integrate psychological and sociological perspective. According to these authors creativity, rather than an outcome, is a process that fluctuates in response to problems that appear over time. Thus, creativity reexplains an individual's engagement in creative activities regardless of whether the outcome of doing so is creative or not. By difference to other conceptual approaches that look at creativity at the individual and group level, Drazin's et al. (1999) perspective is focused on creativity in organizations which, according to the authors, emerges from the process of negotiating multiple meanings and potentially competing interests between different groups within an organization. People get engaged in the development of common meanings in order to understand each other. This behavior also motivates their engagement in creative activities (Heerwagen, 2002).

Unsworth's (2001) theory of creativity questions whether creativity is a unitary construct, arguing that previous approaches, by defining creativity as the production of novel and valuable ideas, disregards other aspects such as the type of idea, why it was generated, what triggered the process, etc. Unsworth developed a set of four creativity types that varied on two variables. The first variable is given by the driver for engagement in creative activities, which can be either external or internal to the individual. The second variable is given by the type of problem, which can be either

open (problem or ideas that are discovered by the individual) or closed (ideas presented to the individual) (Martínez, 2015). This conceptualization results in four creative types exhibited below in Figure 2.3.

Figure 2.3 Unsworth's typology of creative behaviors

	Open problem	Closed problem
Internal driver	Proactive	Contributory
External driver	Expected	Responsible

Source: Deviced by Martínez (2015) based on Unsworth (2001)

Perry-Smith and Shalley's (2003) model of the social side of creativity emphasizes the role of others for generating creative ideas. The authors use concepts from the social network theory (e.g. Granovetter, 1973, 1983) to explore the connection between individual creativity and the context of social relationships (weak ties vs. strong ties between individuals). The authors argue that weak ties are more beneficial for creativity than stronger ties. As explained in Baer (2010) this approach proposes that because non-redundant information has been suggested to be the engine spurring the combinatory process underlying creativity, the development and maintenance of an increasing number weak ties should coincide with elevated levels of creativity.

Taken together, all componential and stage approaches to creativity take into consideration the role that the context plays in creativity. Nevertheless, it can be observed that such context is limited to the immediate environment of the creative employee while culture and socio-cultural aspects that may affect creativity are not

explicitly mentioned in these models. For example, although Amabile (1983) recognizes that creativity is culturally and historically bound, no specific mention of culture as a factor that may condition creativity is made in her models. In a recent paper, Amabile (2012) revisited her componential model of creativity and included the social environment in which the individual is working as the fourth and the only component of the model that is external to the individual. The social environment, as defined by the Amabile, "includes all the extrinsic motivators that have been shown to undermine intrinsic motivation, as well as a number of work environment factors that can serve as obstacles or as stimulants to intrinsic motivation and creativity". Potential creativity blockers, as established by empirical research are: norms of harshly criticizing new ideas; political problems within the organization; an emphasis on the status quo; a conservative, low-risk attitude among top management; and excessive time pressure. The following stimulants of creativity are mentioned: a sense of positive challenge in the work; work teams that are collaborative, diversely skilled, and idea-focused; freedom in carrying out the work; supervisors who encourage the development of new ideas; top management that supports innovation through a clearly articulated creativity-encouraging vision and through appropriate recognition for creative work; mechanisms for developing new ideas; and norms of actively sharing ideas across the organization.

As indicated above most of the theoretical models employed within empirical research in employee creativity do not take into account the cultural dimension of creativity. In her most recent update of the componential model, Amabile (2012) acknowledges that one shortcoming of the theory, as applied to organizations, is its focus on factors within

an organization. Its failure to include outside forces, such as consumer preferences and economic fluctuations, limits the comprehensiveness of the theory in its current form. Similarly, Woodmans' et al. (1993) interactions theory is premised on the idea that creativity is an individual level phenomenon that can be affected by both dispositional and situational variables.

Nevertheless, as previously argued in the introductory part of this dissertation and further in the reminder of this chapter, creativity has a strong social basis (Glăveanu, 2010). Creativity emerges from the interrelationships between the elements of a socio-cultural system. As put by Csikszentmihalyi (2014), creativity emerges when changes are made to a domain of practice (part of the broader cultural system within which the individual lives) that will be transmitted over time and these changes are made by individuals that is acquainted to the norms and rules that govern that domain. The componential models of creativity, albeit some of them take into account the immediate environment of the individual, they fail to integrate the role that culture and the socio-cultural context of the individuals play in creativity. According to Feldman (1999) the cultural and social context is one important dimension that should be taken into account by researchers.

There are certain theoretical models developed to study creativity, such as the systems view of creativity or the cultural psychology of creativity, that take into account the role culture plays in shaping the creative potential of individuals. Rather than seeing creativity as the result of the actions of single individuals, these approaches posit that

creativity comes about as result of a system in operation. In these models creativity is the result of the interplay between creative individuals and their socio-cultural environment. Such theoretical views of creativity are discussed in the next section (Csikszentmihalyi, 2014).

2.3. New perspectives on employee creativity

2.3.1. The systemic views of creativity

Systems-oriented models of creativity (Gruber, 1981; Gruber and Wallace, 1999 Csikszentmihalyi, 1988, 1999, 2014) take one of the broadest approaches to creativity and go beyond the definition of creativity as pure mental process to include into its models the role played by culture and society. Creativity theories falling within this category take the view that creativity is best conceptualized not as a single entity, but as emerging from a complex system with interacting subcomponents – all of which must be taken into account for a rich, meaningful, and valid understanding of creativity (Kozbelt et al., 2010).

Gruber and colleagues (Gruber, 1981, Gruber and Wallace, 1999) pioneered the evolving systems approach to creativity: an account on what creators do. The evolving-systems theory provides a structure to the understanding of creative individuals through the developmental process that play out in complex ways and contexts which led them

to outstanding creations. Studies undertaken under this approach are usually motivated by particular questions such as, how Darwin devised his idea of the evolution of species or, how it was possible for Herbert Simon to be a twentieth-century Renaissance man (Kozbelt et al., 2010).

Csikszentmihalyi has been a prominent proponent of the systems approach to creativity research (Montuori, 2011). The author provides another systems perspective of creativity less focused on the creative person than Gruber's model and more concerned with the important role that the environment plays in creativity. Csikszentmihalyi (2014) considers the cultural and the social contexts as being two salient environmental aspects that affect creativity. He sees creativity as a social construct that is the result of an interaction between the producer and the audience.

Also called the DFI model of creativity, this model considers creativity as the result of the interplay between three systems: (1) the domain [D] of practice which provides knowledge, tools and values and hence stimulates or detracts novelty (culture), (2) the field [F] of practice which evaluates innovations and decide which are valid and should be retained (society), and, (3) the individual [I] that produces the innovations with her personal background, genetic makeup, talents and experience (see Figure 2.4. for a graphical representation of this model).

Within cultures there are many different domains of practice such as: visual arts, music, mathematics, religion, etc. Such domains are the places within which innovations that result in creative contributions take place (Csikzentmihalyi, 2014). Domains vary across

time and they also vary according to their attraction (which in turn varies according to its centrality to the culture, the promise of new discoveries and opportunities, the intrinsic rewards accruing from working in the domain). Domains also vary in terms of their accessibility (how many people have access to the domain's rules and knowledge) and they also vary in terms of how easily they can be changed.

Figure 2.4. A systems model of creativity
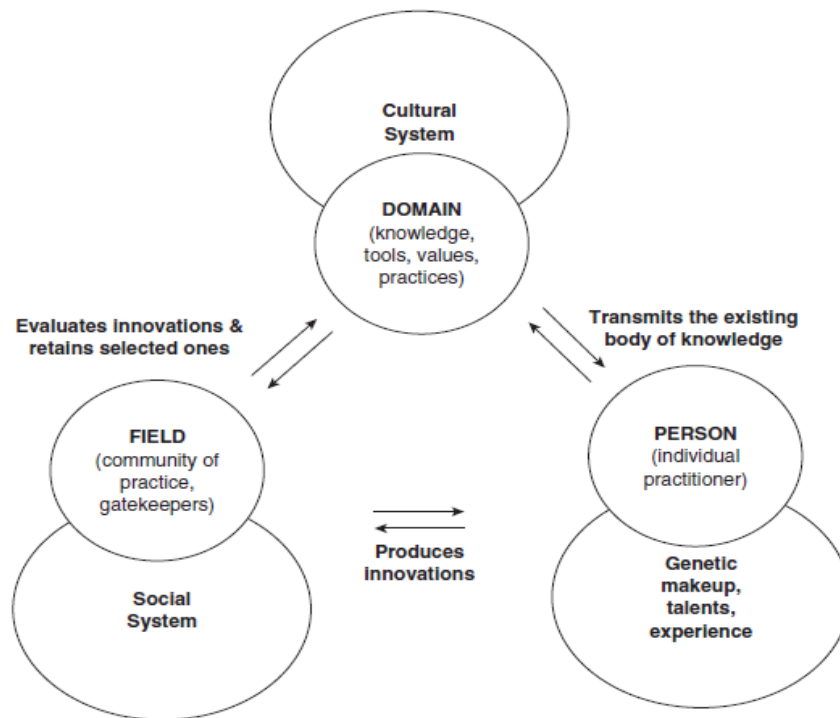
"For creativity to occur, a set of rules and practices must be transmitted from the domain to the individual. The individual must then produce a novel variation in the content of the domain. The variation then must be selected by the field for inclusion in the domain"

Source: Csikszentmihalyi (2014)

The field is made up of all individuals who practice a given domain and have the power to change it (Csikszentmihalyi, 2014). If we consider visual arts as a domain (1), the field (2), would be made up of all art gallery owners, critics, museum curators, art buyers and other players who basically decide what is creative and value within the domain of arts and what is not so. In other words, these people and institutions are the ones that give social validation to individuals' creative acts and decide whether an idea is worth pursuing or not. Fields vary across societies as some societies are more open to novelty than others. One reason for such difference is wealth, with wealthier societies being better equipped to reward and implement new ideas (stimulants of creativity) than subsistence societies. Another reason mentioned for openness differences between societies is social organization – e.g. in farming societies, tradition may count more than novelty; in turn, commerce based societies have been usually favorable to novelty. Other reasons for variation in creativity between societies are: whether the society is located at the confluence of different cultural streams (e.g. the Italian Renaissance was part due to the Arab and Middle east influences brought to Italy by businessmen); external threats facing the society ("Florence in the fifteenth century spent so many resources on the arts in part because the leaders of the city were competing against their enemies in Sienna, Lucca, and Pisa and tried to outdo them in the beauty of their churches and public squares") (Heydenreich, 1974) and, the complexity of the society (with too much divisiveness as well as too much uniformity being unlikely to generate novelty that will be accepted and preserved).

According to the system perspective model, fields affect creativity in several ways. First, fields can be characterized as being either proactive or reactive. In general, reactive fields do not solicit or stimulate creativity. Secondly, there are different approaches that can be chosen in the field for screening new ideas. Some fields are liberal and allow new ideas into the domain whereas other fields are more conservative and allow only a few new items to enter the domain at any new given time. The third way in which fields encourage novelty is by being connected to the rest of social systems.

The creative individual is the third system of Csikzentmihalyi's model. In fact, elsewhere (Csikzentmihalyi, 1996) the author summarizes the research on individual characteristics and highlighting the paradoxical nature of the creative person, a feature long established by research in creativity:

1. Creative people have a great deal of physical energy, but they are also often quiet and at rest.

2. Creative people tend to be smart yet naïve at the same time.

3. Creative people combine playfulness and discipline, or responsibility and irresponsibility.

4. Creative people alternate between imagination and fantasy, and a rooted sense of reality.

5. Creative people tend to be both extroverted and introverted.

6. Creative people are humble and proud at the same time.

7. Creative people, to an extent, escape rigid gender role stereotyping.

8. Creative people are both rebellious and conservative.

9. Most creative people are very passionate about their work, yet they can be extremely objective about it as well.

10. Creative people's openness and sensitivity often expose them to suffering and pain, yet also to a great deal of enjoyment.

Regarding the individual characteristics of creative people Csikszentmihalyi (2014) draws the attention upon the fact that although psychological research in creativity has long examined personal traits conducive to creativity and, over the time, has established several different characteristics of creative individuals (e.g. divergent thinking, problem finding, intrinsic motivation, propensity to break the rules, among others) none of these personal characteristics are sufficient, and probably they are not even necessary. The history of innovation abounds of examples of conservative and unimaginative scientists that have made important contributions to science by stumbling on important new phenomena. In addition, having the background conducive to creativity is indispensable but not sufficient for a person to make a creative contribution. The ability to introduce

novelty into the domain is also a crucial characteristic. In other words, it is the interplay between person, field and domain that predicts creativity. Csikzentmihalyi (2007) summarizes the individual's qualities that affect the incidence of creativity in a systems model as follows:

1. In certain domains (e.g. music, mathematics) genetic inheritance may play an important role in directing interest to the domain and in helping to master it.

2. A great deal of intrinsic motivation is needed to energize the person to absorb the relevant memes (an idea, behavior or style that spreads from person to person within a culture) and to persevere in the risky process of innovation.

3. Cognitive ability such as fluency, flexibility, and discovery orientation seem necessary to engage successfully in the process of generating novelty.

4. To be able to innovate successfully, a person needs to have appropriate traits – which may vary depending on the field and the historical period. In general, one must persevere and be open to experience, as well as adopt apparently contradictory behaviors.

Summing up, Csikzentmihalyi (2014) summarizes on the interplay between the three components of his model by stating that: "The great majority of psychological research assumes that creativity is an individual trait, to be understood by studying individuals. The systems model makes it possible to see that before a person can introduce a creative

variation, he or she must have access to a domain and must want to learn to perform according to its rules. This implies that motivation is important. But it also suggests a number of additional factors that are usually ignored, for instance, that cognitive and motivational factors interact with the state of the domain and the field." Put differently Csikszentmihalyi (1988, 1999, 2014) established a relationship between the creative individual (with their personal characteristics, skills, abilities and experiences), the field (a social system) and the domain (a system of symbols, norms, rules, values; related to the concept of culture).

One major advance made by the systemic views of creativity is that they highlight the contextual and generative nature of creativity. Creativity does not occur in a social vacuum but it is also the result of the interconnectedness between the self and the environment (Montuori and Purser, 1995), a link recognized by the systemic approaches. Such views are conceptually rich, they capture multiple levels of analysis and they acknowledge the intense importance of extra personal, sociocultural factors in creativity (Kozbelt et al., 2010). However, there are several methodological and operational drawbacks of such models given their increased complexity and the qualitative nature of many of their components which make it difficult to test hypotheses unambiguously. An approach that, to some extent overcomes such drawbacks of systemic views of creativity is the cultural psychology of creativity, an emergent perspective on creativity that builds and extends on systemic approaches. This approach is discussed in the following sub-section.

2.3.2. The cultural psychology of creativity

Glăveanu (2010) provides a critical review of creativity theories and also concludes that the three dominant paradigms fail to properly capture the role that the broader socio-cultural environment plays in creativity. The author groups the creativity theories into three main categories of paradigms, according to the importance given to the creative individual and to the environment, respectively. First, the author discusses the He-paradigm, focused on the study of geniuses, which considers creativity to be a characteristic of a few, gifted, individuals. The I-paradigm, extends the scope of creativity research by democratizing creativity and attributing it to all individuals. Finally, by incorporating the social psychology view of creativity, the We-paradigm sees creativity not only as the result of internal dispositions of creative individuals but also as the result of human interaction and collaboration.

All three paradigms are criticized as being highly individualistic in nature and for not taking into account the socio-cultural aspect of creativity. Although, the We-paradigm aims to put the social back in creativity research (Hennessey, 2003) by acknowledging the social nature of creativity and by integrating a social psychology perspective into the study of creativity (e.g. a focus on the creativity that is the result of human interaction, an interest in studying group creativity), Glăveanu (2010) observes that it still endorses a vision of the social that corresponds more to individualistic paradigms than to a truly social perspective. The author further uses the example of Amabile's (1996) componential theory to indicate that the model, by dealing with components such as domain-relevant skills, creativity-relevant processes and task motivation does not

abandon the understanding of creativity as an individual level phenomenon conditioned by social factors[1].

Glăveanu (2010) also discusses the systemic views of creativity which are considered to be perhaps the greatest achievement of the We-paradigm. Among the main advantages of such models are mentioned the higher degree of contextualization of creative acts, the more comprehensive account given of how creativity takes place in all its complexity, and how they conceptualize creativity as being less dependent on innate abilities and personality traits.

Among the drawbacks of systemic models, Glăveanu (2010) mentions Runco's (1999) concern with the problematic of comparing individual with social factors. He claims that it is the social factors that are not necessary for creativity and proposes a separation between creativity and reputation since this would eliminate social noise affecting the inner dynamic of creativity. The author further points out that the social does not perturb creativity but allows it, since, without the social context, there would be no creativity and proposes a new approach within the We-paradigm, named the cultural psychology of creativity.

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[1] As mentioned previously during this chapter, Amabile reframed her model to include the effect of the social environment. However empirical tests of the updated model are not yet available, as far as the author knows.

Cultural psychology, as defined by Shweder (1990) is the study of how cultural traditions and social practice regulate, express, transform and permute the human psyche. The basic premise of this field of research is the interdependence between human beings and their socio-cultural context, being its research focus on the sociocultural genesis of mental functions, and the analysis of everyday life.

Within the proposed framework of cultural psychology of creativity Glăveanu (2010) defines creativity as "a complex socio-cultural-psychological process that, through working with culturally-impregnated materials and within a intersubjective space, leads to the generation of artifacts that are evaluated as new and significant by one or more persons or communities at a given time" (see a graphical representation in Figure 2.5)

According to the framework, the creative product or the new artifact emerges within the relation between the creative individual and the community. The model is, as characterized by the author himself, a dynamic one since it is in the tensions between all four elements that creativity takes shape with the new artifact becoming part of existing culture (for self and/or community) and constantly feeding the creative cycle. Put differently, the creativity of individuals is determined both by their predispositions as by the interrelationships they have with the community they live and act in. Creative individuals use previously creative artifacts (e.g. symbols, norms, rules, values) existing in the culture, to produce new artifacts that are returned to the culture once created.

Figure 2.5. The cultural psychology of creativity
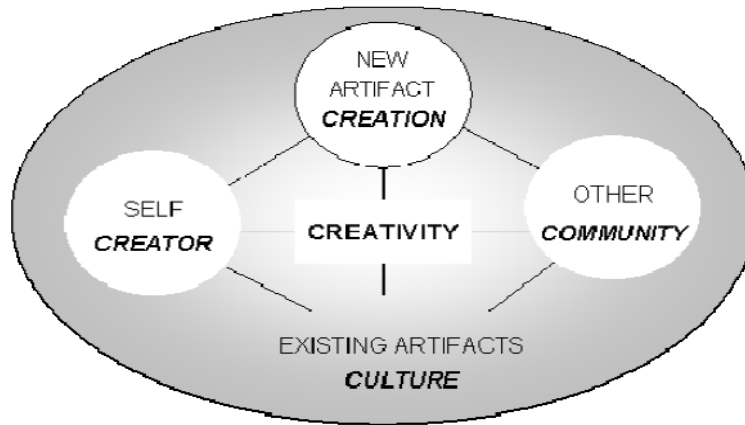
Source: Glăveanu (2010)

The major advantage of this perspective is that it captures the complexity of creativity by focusing on the relationships between the creative individual (self) the communities they live and create in (others) and the culture that provides the inputs for the conception of new creative products. This focus on culture and relationships between creative individuals and community besides being a novel approach to creativity research, it also fills a conceptual gap of this field of research (as previously commented there is a scarcity of the empirical studies that rely on sociocultural conceptualizations of creativity to take into account the role of culture). As mentioned by the author creativity is not simply conditioned by social factors, its mere nature is relational since it could not exist outside of the cultural resources and dialogical relations.

Reviewing the theories developed to explain creativity in working settings one can easily observe that they do not take into account the role played by culture in shaping creative behavior (or, if they do so, it is only superficially). Although not employed previously by research in organizational creativity, the systemic view and the cultural psychology of creativity could be fruitfully used for a more adequate analysis of employee creativity. One major advantage of these two approaches is that they both take into consideration culture as an important determinant of creativity. The theoretical models previously used in research to conceptualize employee creativity focus mostly on individual traits and organizational characteristics as major influencers of creative behavior. While without doubt the creativity of individual is influenced both by internal dispositional factors such as education, skills, experience, motivation etc. and by contextual factors such as the support received from family, peers, coworkers and supervisors; it is also heavily influenced by culture (the relationship between culture and creativity has been highlighted by many cross-cultural studies such as Lubart (1990; 1999); Rudowicz and Hui (1997); Runco, Lim and Plucker (2001), among others).

According to Kim (2009) most factors affecting creativity have a relationship to a person macrocosm, e.g., the environment or culture in which that person exists. Yet, despite empirical evidence indicating the existence of a link between culture and creativity and, although some creativity scholars have provided theoretical conceptualizations of such a link, culture remains a relatively understudied topic within research on employee creativity (Chua, 2015; Leung, 2010, 2015). As stated previously it is the aim of this dissertation to examine the effect of culture on employee creativity.

Hence, a presentation of how culture is conceptualized by theorists (in the sense used in this dissertation) is in order and is provided in the following section.

2.4. The concept of culture

Culture is a concept that may have different meanings. For example, a quick look in the Oxford English Dictionary reveals the multitude of meanings ascribed to the word culture. If it does not refer to erudition, fine arts and humanities or the act or process of cultivating living material, culture is defined as follows (being this also the sense ascribed to culture within this dissertation):

a) the integrated pattern of human knowledge, belief, and behavior that depends upon the capacity for learning and transmitting knowledge to succeeding generations;

b) the customary beliefs, social forms and material traits of a racial, religious, or social group; also: the characteristic features of everyday existence (as diversions or a way of life) shared by people in a place or time

c) set of shared attitudes, values, goals, and practices that characterizes an institution or organization

d) the set of values, conventions, or social practices associated with a particular field, activity, or societal characteristics.

In the scientific research arena, social scientists have also provided multiple definitions to the concept of culture similar to those stated above. Parson (1949) defined culture as consisting in those patterns relative to behavior and the products of human action which may be inherited, that is, passed on from generation to generation, independently of the biological genes. Useem and Useem (1963) refer at culture as the learned and shared behavior of a community of interacting human beings. Banks et al. (2009) explain the concept as follows: "Most social scientists today view culture as consisting primarily of the symbolic, ideational, and intangible aspects of human societies. The essence of a culture is not its artifacts, tools, or other tangible cultural elements but how the members of the group interpret, use, and perceive them. It is the values, symbols, interpretations, and perspectives that distinguish one people from another in modernized societies; it is not material objects and other tangible aspects of human societies. People within a culture usually interpret the meaning of symbols, artifacts, and behaviors in the same or in similar ways."

Anthropologists define culture as consisting of "patterned ways of thinking, feeling and reacting, acquired and transmitted mainly by symbols, constituting the distinctive achievements of human groups, including their embodiments and artifacts: the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and

especially their attached values" (Kluckhohn, 1951). This definition was further reformulated by Kroeber and Kluckhohn (1952) into the following: "culture consists of **patterns**, explicit and implicit, of and for **behavior** acquired and transmitted by symbols, constituting the distinctive achievements of human groups, including their embodiments in artifacts; the essential core of culture consists of traditional (i.e. historically derived and selected) **ideas** and especially their attached **values**; culture systems may, on the one hand, be considered as **products of action**, and on the other as conditioning elements of further action."

The definition of culture best fitting the purposes of this dissertation is the one formulated by Geert Hofstede (2001), one prominent figure in cultural research (his seminal book, Culture's Consequences published originally in 1980 and re-edited in 2001, have been cited over 69,000 times in Google Scholar), and defines culture as "the collective programming of the mind that distinguishes the members of one group or category of people from another". He further adds that culture is to human collectivity what personality is to an individual. Culture could be defined as the interactive aggregate of common characteristics that influence a human group response to its environment. Culture determines the uniqueness of a human group in the same way personality determines the uniqueness of an individual. In his definition, as indicated by himself, the mind stands for the head, heart and hands – that is, for thinking, feeling, and acting, with consequences for beliefs, attitudes and skills.

It is in this sense (of the definitions explained above) that employee creativity might be influenced by culture. This study might suggest and interpretation upon which employees creative behavior might be affected by how others around them perceive the way in which employees make use of their personal characteristics, skills, abilities or experience in their work and, also, make use of organizational creative tools to generate novel and useful ideas. For example, as mentioned in Csikszentmihalyi (2014) it was culture also that provided support or favorable conditions for great creative minds such as Copernicus, Lavoisier or Galvani to create and produce their novel ideas. These people lived in cultures with a tradition of systematic observation of nature and a tradition of record keeping and mathematical symbolization that made it possible for their insights to be shared and evaluated by others who had equivalent training.

The cultural environment provides people and therefore, employees also, with certain values, patterns of behavior and attitudes towards creativity which may affect own creative potential. Empirical research suggests, for example, that there is a link between creativity and employees' individual values (e.g. Rice, 2006). Values, as it will be discussed later during this chapter, are the core component of culture (Hofstede, 2001). Hence the values that employees hold regarding creativity may have a direct effect on their creativity. However, we can distinguish among to different categories of cultural values in the case of employees. First, there are the cultural values provided by the broader environment such as the nation or the country the employee belongs to. Such values are adopted by the individual regardless of their working status (during the day-to-day life outside the workplace). In addition, there are values specific to the culture of

the workplace or the organizational culture (one specific area in which employees can manifest their creativity). The organizational culture comprises values and behaviors that define the unique social environment of an organization. And finally there are the individual psychological self-values.

A more formal definition, as the one provided by Schein (1984), considers organizational culture as the pattern of basic assumptions that a given group has invented, discovered, or developed in learning to cope with its problems of external adaptation and internal integration, and that have worked well enough to be considered valid, and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems. According to Barney (1986) the organizational culture includes the set of core managerial values about how to treat employees, customers, suppliers and others that define the ways organizations conduct business; being these values the ones that foster innovativeness and flexibility in firms.

The organizational culture comprises values, attitudes, norms, rules and expectation that the organization has regarding employees' behavior. Many organizational culture researchers (e.g. Judge, Fryxell and Dooley, 1997; Tesluk, Farr and Klein, 1997; Tushman and O'Reilley, 1997) agree that organizational culture is a contributing factor to the degree to which creativity and innovative behavior is found among employees in an organization (Martins and Martins, 2002). Tesluk, Farr and Klein (1997) indicate that "[t]he beliefs and values that typify a culture for creativity become manifested in organizational structures, practices, and policies. In turn, these structures, practices, and

policies guide and shape individual creativity by creating a climate that communicates both the organization's goals regarding creativity and the means to achieve those goals". In addition, numerous studies in organizational creativity provide evidence that the organizational culture (a subculture within the broader cultural environment of a nation or country) with its own values, symbols, procedures, etc. affects the creativity of employees (see Zhou and Shalley, 2007, for a discussion in this sense).

Psychologists, sociologists and anthropologists see values as the criteria people use to evaluate actions, people and events (Schwartz, 1992). According to the definitions given to culture, there are several different components of culture (e.g. patterns of and for behavior, symbols, values, etc.). Hofstede (2001) synthesizes the main elements of culture through his Onion Diagram (see figure 2.6 below). Values are ideas about what is good, right, fair and just. As they represent beliefs that people hold regarding what is important in their lives, values are invisible. They become visible when manifested in behavior. The remaining components, namely symbols, heroes, practices and rituals are visible manifestations of culture. Symbols are words, gestures, pictures and objects that carry often complex meanings recognized as such only by those who share the culture - e.g. dress, hairstyle, Coca-Cola™, status symbols, etc. Heroes are individuals alive or dead, real or imaginary, who possess characteristics that are highly prized in a culture and thus serve as models for behavior - e.g. historical figures or even fantasy or cartoon figures. Rituals refer to collective activities that are technically unnecessary to the achievement of desired ends, but that within a culture are considered socially essential,

keeping the individual bound within the norms of the collectivity - e.g. ways of greeting and paying respect to others, religious and social ceremonies, etc.

Figure 2,6 The "Onion Diagram": Manifestations of Culture at

Different Levels of Depth
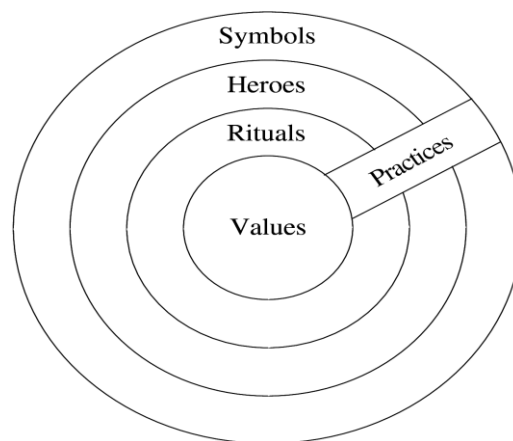
Source: Hofstede (2001)

According to Hofstede (2001), in order to compare individuals we study their values, whereas in order to compare societies we need to study cultures. Yet, cultures and individuals cannot be treated as separate entities. Cultures develop over time through ideas shared by individuals with respect to different aspects of life. There is therefore, a reciprocal relationship between culture and individuals. Cultures shape individuals and, individuals use their ideas and values to create cultures. Hence, cultures and individuals cannot be studied separately. As put by Hall (1976) culture is not genetically inherited, and cannot exist on its own, but is always shared by members of a society.

If, as seen from before, culture plays an important role in creativity then, there may be an intimate relationship between an individual's cultural values and his/her creativity. Some organizational creativity researchers argue that that organizational culture affects the level of creativity. Rice (2003) points out how employees can engage in creative behavior as long as the working conditions within the organization are flexible enough and conducive to allow for individual and group creativity.

Based on the aforementioned literature, this study suggests that people working in organizations have their own cultural profile (their own collective programming of the mind) built during their lives since childhood. Hence, from a bottom-up approach, it may be the case that, by bringing with them their own cultural luggage into the organization, employees also bring with them their own values, beliefs and attitudes regarding the value of creativity and the necessity of creative behavior. If we take a top-down approach, top managers and employees' supervisors, in general employees occupying managerial positions, also bring into the organization their own cultural luggage comprising beliefs and values regarding creativity which contribute to the way into these people build and shape organizational culture. It may be also the case that a national culture favoring creativity will easily permeate into the organization and favor values and expectations regarding creativity of both employees and managers.

One way at investigating the validity of the aforementioned statements is by examining the possible effects that 1) individual values; 2) organizational culture and, 3) the broader, national culture have on employees' creativity (which is also the purpose of the current study). As mentioned previously cultural values appear as the core concept

(element) of cultures regardless of how broad it is (individuals as well as organizations and entire nations build their cultures as a collection of values that guide their behavior and distinguish them from other individuals, organizations and nations). A definition and a more detailed explanation of the concept of value is therefore in order and is also the purpose of the next section.

2.5. Cultural values and creativity

According to Hofstede (2001) values are the core element of culture. Cultural values represent "the bases for the specific norms that tell people what is appropriate in various situations. The ways that societal institutions (e.g. the family, education, economic, political, religious systems) function, their goals and their modes of operation, express cultural value priorities" (Schwartz, 1999). In his theory of human values, Schwartz (1992, 2005) summarizes the main conceptions of basic values as found in scientific research literature. First, values are beliefs linked to affect. They become infused with feeling when they are activated. For example, a person which values independence can become aroused if her independence is threatened, despair if she cannot protect it and happy when she can enjoy it. Values also refer to desirable goals that motivate action. People are motivated to pursue the goals dictated by values (e.g. social order, justice, etc.). Values also serve as standards or criteria as people decide what is good or bad, positive or negative based on the consequences for the values they cherish. In addition, values transcend specific actions and situations, some values are highly relevant in multiple

circumstances (e.g. the relevance of honesty in sports, business, with family or strangers, etc.). According to Schwartz, this feature distinguishes values from narrower concepts like norms and attitudes that usually refer to specific actions, objects, or situations. People Rank their values by importance (with certain values being more important than others; e.g. novelty vs. tradition, achievement vs. justice, etc.) , a feature that also distinguishes values from norms. Finally, human action is guided by the relative importance of multiple values. Any attitude or behavior typically has implications for more than one value. For example, attending church might express and promote tradition, conformity, and security values at the expense of hedonism and stimulation values. The tradeoff among relevant, competing values is what guides attitudes and behaviors.

Cultural values have also been recognized by researchers as influencing creativity. For example Rank, Pace and Frese (2004) indicate that "[c]ultural values likely influence if and how creativity and innovation are enacted and cultivated in different countries." Csikszentmihalyi (2014) indicates the relationship between values and creativity by stating that "[v]alues also play a role in developing a creative career. There are indications that if a person holds financial and social goals in high esteem, it is less likely that he or she will continue for long to brave the insecurities involved in the production of novelty, and will tend to settle instead for a more conventional career. A person who is attracted to the solution of abstract problems (theoretical value) and to order and beauty (aesthetic value) is more likely to persevere."

There are multiple levels in society for which culture can be defined, each level with distinct values, norms, language and symbols (Hofstede et al., 2005). According to Uljin and Weggeman (2001) there are four different cultures: occupational or professional culture, organizational culture, industry culture and national culture. In examining the effect of culture on employee creativity, it is therefore useful to distinguish between at least two different sets of cultural values that may affect the creative potential of individuals. First there is the generic cultural make-up of the individual, the one shaped by the national geographical space that person lives in as well as by the historical moment (national culture characteristics). The second set is the one given by the environment where the individual gets engaged in the creative act. If the unit of analysis is the workplace and the focus is on people's creativity as employees, then the organizational culture may permeate and program the employees to the values, symbols and norms that establish how the organization is functioning and how it relates to the external environment (i.e. the organizational culture). Thus, it may be likely for employees to exhibit creativity at work if among the values defining the organizational culture employees are exposed to and programmed through creativity supportive values.

Schwartz (1992, 1994, and 1999) formulated a theory of basic human values which identifies ten motivationally distinct types of values that all people in all cultures recognize (Schwartz, 2006) (see Table 2.2). According to Rice (2006) the creativity literature suggests five particular value types that relate to employee creativity, namely 1) Self-direction, 2) Stimulation, 3) Achievement, 4) Conformity and, 5) Power.

Table 2.2 Value types in Schwartz's theory of basic human values

Value type	Explanation
Achievement	Personal success through the demonstration of competence in accordance with society's standards, e.g., ambition
Benevolence	Preservation and enhancement of the welfare of others in one's immediate social circle, e.g., forgiveness
Conformity	Restraint of actions that violate social norms or expectations, e.g., politeness
Hedonism	Personal gratification and pleasure, e.g., enjoyment of food, sex, and leisure
Power	Social status, prestige, dominance, and control over others, e.g., wealth
Security	Safety, harmony, and stability of society, e.g., law and order
Self-direction	Independent thought and action, e.g., freedom
Stimulation	Excitement, novelty, and challenge in life, e.g., variety
Tradition	Respect for and acceptance of one's cultural or religious customs, e.g., religious devotion
Universalism	Understanding, appreciating, and protecting all people and nature, e.g., social justice, equality, environmentalism.

Source: Self-devised, based on Scwhartz (1994).

Values, as main components of culture, have an influence on creative behavior (Fernald, 1987; Kasof et al., 2007). Yet the literature on the nature and direction of the relationship between cultural values and the self-perceived creativity at work is scarce.

Notable exception to this is the work of Rice (2003, 2006) who examined the impact of Schwartz's (1994) individual values on employees self-perceived creativity in Arabian-Gulf firms and Egypt, respectively. Similarly, Kim (2007, 2009) and Martinsons (2004) examined how Confucianism may affect perceptions of creativity in Korea and China, respectively. Evidence regarding this relationship in other geopolitical and socio-cultural contexts is not available (as far as the author knows). It is therefore among the aims of this dissertation is to examine how individual values affect employee creativity in a distinct context (i.e. Spanish firms).

2.6. Chapter Summary

In this chapter we discussed the major theoretical approaches used by research in organizational creativity. These theories belong to the broader category of Componential and Stage Models of Creativity pioneered by Wallas (1926). According to these theories, which are focused on understanding the creative process, creative expression proceeds through a series of stages or components, where the process can have linear and recursive elements.

Among the stage and componential approaches, Amabile's (1983, 1988, 1996, 2012) componential model of creativity, and Woodman's et al. (1993) interactions model, are the theoretical frameworks most frequently used within research on organizational and employee creativity. Amabile's model views the creative result as being affected by

individual's domain relevant skills (defined by education and abilities), the type of motivation (i.e. extrinsic or intrinsic) and the creativity relevant processes (affected by training, experience and personality). In response to criticism to the model for not taking into account the effect of the external environment on creativity, Amabile (2012) extended the framework to include social factors. However the author does not mention culture as a factor that may affect creativity. Similar to the componential model, the interactions approach to organizational creativity developed by Woodman (1993) is premised on the idea that creativity is an individual level phenomenon that can be affected by both dispositional and situational variables. According to the model, it is the interaction between the person and the situation that better explains creative outcomes in organizational settings.

In addition to the componential and interactions approach there are other similar but less prominent intents to explain organizational creativity. Although they take into consideration the effect of the context on organizational creativity, one problem with componential approaches is that they limit the context to the immediate environment of the creative employee while culture and socio-cultural aspects that may affect creativity are not explicitly mentioned in these models.

Although they were not yet applied to the study of organizational creativity, theoretical approaches such as the system's view and the cultural psychology of creativity may provide a solid framework for the study of how the socio-cultural context, by shaping individuals' values and beliefs, may affect employee creativity. Rather than seeing

creativity as a single form, the systemic approaches conceive creativity as emerging from a complex system of interconnected elements recognizing this way the relationship between the individual and the cultural environment and the effect of such relationship on creativity and creative performance. This conception of creativity emergence is very well suited for the purpose of this study. That's the reason why, first Csikszentmihalyi's (1988) systemic approach and, second and specially Glăveanu's (2010) cultural psychology of creativity will conform the base of the conceptual model proposed in chapter 3.

There are multiple levels in society for which cultural environments and its related culture can be defined, each level with distinct values, norms, language and symbols (Parson ,1949; Useem and Useem, 1963; Banks,2009; Kroeber and Kluckhohn,1952; Hofstede, 2001; Schein, 1984; Barney, 1986). And many organizational culture researchers (e.g. Judge, Fryxell and Dooley, 1997; Tesluk, Farr and Klein, 1997; Tushman and O'Reilley, 1997) agree that organizational culture is a contributing factor to the degree to which creativity and innovative behavior is found among employees in an organization (Martins and Martins, 2002). Although it's also recognized as and understudied topic and that more research should be done to better understand it.

Values are considered the core element of culture (Hofstede, 2001), and cultural values have been recognized by researchers as influencing creativity. As the purpose of this study is focused on the relationship between culture and employee creativity in the

workplace, values will become the cornerstone that will link cultural environments with organizational creativity (both of them from the employee's perspective).

Based on the previous statements, to study the relationships between employee creativity and the cultural context, next chapter of this dissertation will be based on the framework of an stage and componential approach joint with a systemic perspective and, specially, cultural psychology approach, where employee values (representing the employee's individual cultural traits) and the employee creativity process, will be at the center of the discussion.
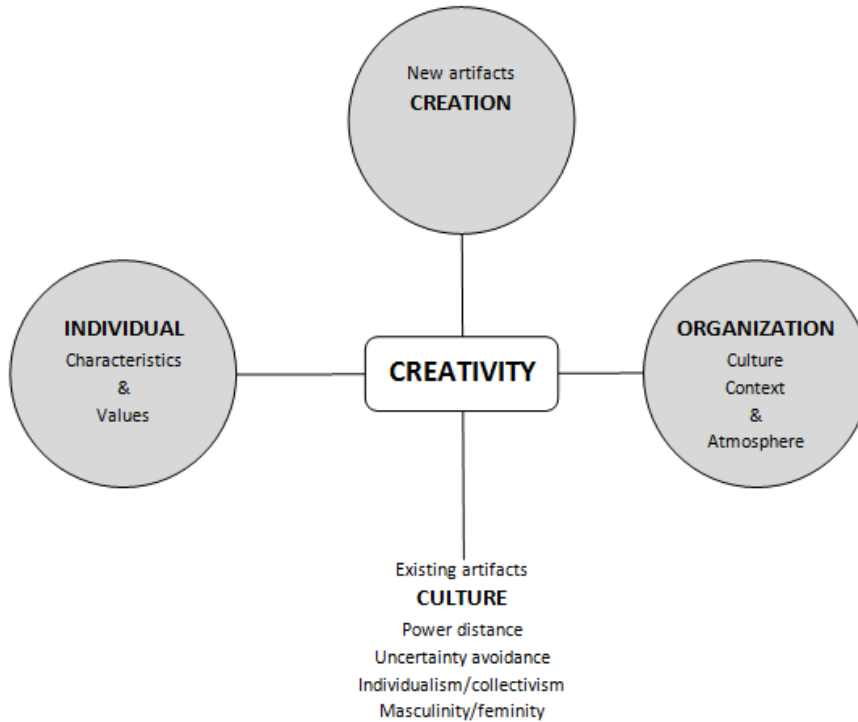
Chapter 3 - Conceptual model and hypotheses

There is scarce evidence regarding the determinants of employees' creativity in Spain (Martínez-Casanovas, 2015). According to Boix-Domenech and Lazzaretti (2012), although about 22% of Spanish employees belong to the creative class and about 5.7% of the Spanish production is generated by creative industries, scientific research focusing on creativity in Spanish organizations is poor. In the empirical application of this thesis, the creativity of 198 employees from 10 Spanish organizations is examined. Based on Glăveanu's (2010) approach, in addition to individual values and the organizational context, the study also takes into account a selected set of cultural factors that may affect employees' creativity. There are relatively few empirical studies that examine the relationship between culture and employees' creativity in organizations as for example Rice (2003, 2006) (although these studies didn't include the society broad culture's influence) and thus, it is necessary to extend the empirical evidence to more countries and regions. The rationale is that creativity may vary not only as a function of employees' individual characteristics - such as personal background, knowledge, skills, cognitive styles or motivation – (Amabile, 1983, 1996, 2000; Shalley, 1995; Woodman et al., 1993; Scott and Bruce, 1994; Oldham and Cummings, 1996; Mumford et al., 1997; Reiter-Palmon et al., 1997; Shalley and Oldham, 1997; Tierney, Farmer and Graen, 1999; Vincent, Decker and Mumford, 2002) and, as a function of the organizational context – such as work settings, job characteristics and relationships with co-workers and supervisors - (e.g. Amabile and Gryskiewicz, 1989; Hatcher, Ross and Collins, 1989; Tierney and Farmer, 2002, 2004; Farmer, Tierney and Kung-McIntire,

2003; Amabile and Conti, 1999; Frese et al., 1999; Zhou and George, 2003; Shin and Zhou, 2003), but creativity among an organization's employees may also be seen as a function of the broader sub-cultures and/or cultures those employees belong to (Martinsons, 2004; Miron et al., 2004; Rice, 2003 and 2006; Kim, 2007 and 2009). As mentioned in Wycoff (2003) culture is the playing field of innovation. Unless the culture honors ideas and support risk taking, innovation will be stifled before it begins. Thus a thorough understanding of the way in which culture affects creativity may also provide an understanding on the exact way in which culture may 'honor' creativity and support risk taking. This, in turn, can provide valuable insights for those interested in developing methods and policies to foster creativity among employees in organizations.

The conceptual model used in this dissertation is derived from Glăveanu's (2010) cultural psychology of creativity which states that creativity is the result of the interplay between the creative individual, the community and culture (self-community-existing artifacts-new artifact), although adapted accordingly to embrace an organizational creativity perspective, inspired by the complementary theoretical frameworks mentioned in chapter 2. Figure 3.1 below offers a graphical representation of the model used.

Figure 3.1. A cultural model of employee creativity

New artifacts
CREATION

INDIVIDUAL
Characteristics
&
Values

CREATIVITY

ORGANIZATION
Culture
Context
&
Atmosphere

Existing artifacts
CULTURE
Power distance
Uncertainty avoidance
Individualism/collectivism
Masculinity/feminity

Source: Adapted from Glăveanu (2010)

Glăveanu's (2010) cultural psychology of creativity approach was not developed specifically within the organizational creativity domain, but might be helpful to answer our research question focused on culture influence and employee's creativity at workplace. To this end, this systemic view of the cultural psychology of creativity and its components, might be complemented with the help of other more tangible theoretical frameworks to make more operational those system's components.

In fact, in our conceptual model the self component will be investigated mainly although not exclusively, with the support of Amabile's (1983, 1988, 1996)

componential theory of creativity as one prominent approach to study creativity in working settings, and also with the support of Schwartz's (1992) human values theory. Likewise, mainly although not exclusively, the community component will be studied through the interactions approach, proposed by Woodman, Sawyer and Griffin (1993); and the existing artifacts component, that represents somehow the cultural setting of the community at a broader level in Glăveanu's model, will be studied through the Hofstede's (1980) national cultural dimensions approach, and the systemic perspective of Csikszentmihalyi (2014).

According to the model, in working settings, employees' level of creativity is determined by their generic cultural makeup (e.g. national culture). In fact, individuals that belong to cultures that praise creativity are expected to be more creative. This effect is also determined by the work environment and the cultural values broadly shared within that environment. In addition to these, the personal characteristics of the individuals and their individual stand-alone values, also affect their creative potential. The following hypotheses will be tested regarding the aforementioned model.

3.1. Preliminary considerations in relation to values-related variables

When studying cultural traits and values, the multilevel analysis options to tackle the issue might create confusion that would go against the necessary rigorousness of definitions, measures and comparisons between studies and their findings. Likewise, the different theories or measurement instruments used might generate a similar effect. In this regard, following reflections and clarifications are explained, prior to enter into the definition of variables of the proposed model.

3.1.1. The use of both Schwartz and Hofstede measures

For the purpose of this study it is suggested to use both value measures, this is, Hofstede's (1980) cultural dimensions and Schwartz' (1994) individual values.

Upon our conceptual framework, based on the systemic view and the cultural psychology of creativity described in chapter 2, this study suggests the need to measure the individual stand-alone values, in the sense of values ingrained in innate abilities and personality traits (Glăveanu, 2010) as well as in the sense of individual's values acquired from society; the latter, researched by the approach of 'Cultural psychology', as defined by Shweder (1990): the study of how cultural traditions and social practice regulate, express, transform and permute the human psyche.

In our conceptual framework, the individual and the cultural context, represent two key elements to be studied regarding values. So, it is suggested that Schwartz and Hofstede,

although being sometimes competing approaches in cross-cultural studies, represent two complementary approaches useful for the purpose of this study. In consequence, it is suggested to use both measures aforementioned, just with the aim to enrich observation perspectives and empirical findings of this study.

Reviewing the studies of Schwartz (1992, 1994) and Hofstede (1980, 2009), it is suggested that both might be compared in terms of the motivational goals (the values' nature) and the response to universal requirements (the values' sense) of the target under study (the values' domain).

Schwartz (1994) theory focuses on the target 'individual' and includes interaction with the 'society / collectivity / group'. Departing from them, selects a set of known values, classifies them into 'value types or individual values' in function of its 'motivational goal', where motivational goals represent a kind of response to one or more of the 'universal requirements' of the target (individual and group interaction / society) consisting of: 1) needs of Individuals as biological organisms, 2) Coordinated requirements of social interaction, and 3) requirements for the smooth Functioning and survival of groups.

In a similar way, Hofstede (2009) studies focus on the collective target (society) but does not include its components individually. Also selects (or assimilates under the concept of culture) implicitly a set of known values, classifies them into "cultural national dimensions' in function of their (similar to Schwartz) 'motivational goals', where they represent a kind of response to an universal requirement of the target

(society) consisting of: society's patterns for living and for dealing with such universal circumstances as the existence of two sexes; the helplessness of infants; the need for satisfaction of the elementary biological requirements such as food, warmth, and sex; the presence of individuals of different ages and of differing physical and other capacities.

In both cases there are known values outside the scope of their studies. This is explicitly recognized by Schwartz regarding, for instance, what he names the 'spiritual values' of the individual. For Hofstede the same situation is presumed, just thinking about the limitless complexity of a society. The domains in which both of them work have a common element, people, but they are studied at different levels, Schwartz based on the individual (and continuing with his group) and Hofstede based on the social collectivity (and staying there), so you can visualize two domains with intersections but also not common study areas. Likewise, universal requirements to which they try to answer through their value types proposal, have points of mutual contact for the simple fact that these requirements emanate from people in both cases, but they are not identical because their domains (targets) are distinct in their scope (individual and environment versus society). And consequently, their types of values can represent common elements in some cases, and not common elements in others, attempting to respond to different universal requirements in some aspects.

Therefore, it is considered of interest for the purpose of this study, to use both measures separately when studying the employee creativity within the conceptual framework explained in Chapter 2, and upon following arguments.

Coming back to the conceptual model proposed in this dissertation, derived from Glăveanu's (2010) cultural psychology of creativity, it is suggested that creativity is the result of the interplay between the creative individual, the community and culture (as, expressed in former figure 3.1).

As we explained before, according to the model, in working settings, employees' level of creativity is determined by their generic cultural makeup, by the culture of the organizations they work in (where Hofstede's measure might be very useful), and by the personal characteristics of the individuals and their individual stand-alone values (where Schwartz's measure might be very useful).

As mentioned in Chapter 2, in his systemic view of creativity, Csikszentmihalyi (2014) states that the individual produces the innovations with her personal background, genetic makeup, talents and experience. He summarizes the individual's qualities that affect the incidence of creativity in a systems model as genetic inheritance, a great deal of intrinsic motivation , perseverance in the risky process of innovation, discovery orientation, open to experience, among other traits and behaviors. In this line, Rice's (2006) study stated that literature suggests that certain individual [Schwartz's] value types should be related to employee creative behavior. These value types were Self-direction, Stimulation, Achievement, Conformity, and Power,

Likewise, as mentioned in Chapter 2, and according to our conceptual model, Glăveanu (2010) provides a critical review of creativity theories as being highly individualistic in nature and for not taking into account the socio-cultural aspect of creativity. The author further points out that without the social context, there would be no creativity. From this perspective, Hofstede's (1980, 2009) national cultural dimensions help to characterize this broad social context, based on (in this case, employees') society's patterns for living and for dealing with universal circumstances. Furthermore, cultural values have also been recognized by researchers as influencing creativity. For example Rank, Pace and Frese (2004) indicate that cultural values likely influence if and how creativity and innovation are enacted and cultivated in different countries.

Thus, Schwartz (1994) proposes a universal vision of the values of the individual, which has enabled researchers to study relationships between the individual and creative work environments (e.g. Rice, 2006). Hofstede (1980) proposes a universal vision of national societies, and it has also enabled researchers to study relationships between national cultures and creativity in working environments (e.g. Abridah, 2012). More arguments and cites in this sense will be explained in next sections about the (Schwartz and Hofstede) independent variables literature review.

In consequence, this study will use Schwartz's individual values as a useful measure to evaluate aforementioned individual stand-alone values around employee creativity, within our systemic and cultural psychology of creativity conceptual model. Likewise, this study will use Hofstede's national cultural dimensions (properly adapted to an

individual level of analysis, as explained in next section) as a useful measure to evaluate aforementioned socio-cultural context around employee creativity, also within our systemic and cultural psychology of creativity conceptual model.

3.1.2. The use of Hofstede's cultural dimensions at an individual level, and the variable's literature review at a collective level when proposing hypotheses at an individual level

As it has been explained previously, Hofstede's (1980) model was developed with the purpose of characterizing the cultural make-up of entire nations. Therefore, one could question its applicability at an individual level. Furthermore, some of the following literature review studied the relationship between certain cultural contexts and creativity at a group level analysis), when in fact, from that literature it's not possible to (simply) presume that individual cultural values derived from that environment, will produce the same effects on the individual creativity (so, at an individual level of analysis). In both cases, it is a matter of the level of analysis in the research, and the need to avoid the ecological fallacy (or ecological inference fallacy) in the interpretation of statistical data in this study, where inferences about the nature of individuals will be deduced from inference for the group to which those individuals belong.

This study will use both Hofstede approach and the aforementioned literature, making the necessary adaptation from a collective level to an individual level of analysis. To do so, it is suggested to assume this adaptation through the phenomenon of 'socialization'.

Dorfman (1988) in his study (to extend the Hofstede's measurement of culture to the individual level as evidenced by the strength of an individual's belief in key cultural values), states that socialization is often viewed as a process of acquiring capabilities, dispositions and values that make persons "more or less able members of their society". Adult socialization involves general societally endorsed principles (Dion, 1985) or metraprescriptions (Brim, 1966) that help people deal with multiple role pressures of living in the society. Not only do individuals vary in the extent they adher to societal prescriptions but some prescriptions are more value laden, and mores strongly enforced, than others. These prescriptions correspond to the dimensions of national culture used in this study. Furthermore, Dorfman (1988) states that the sociocultural system and the individual system are the theoretical frameworks likely to be studied. The former is concerned with the institutions, norms, roles, and values as they exist outside the individual, and the latter is concerned with the subjective culture as reflected by the individual's perception of the element of the cultural system. The process by which individuals acquire the cognitive frame of reference and acceptable patterns of behavior characteristic of a culture has been called acculturation, enculturation and socialization.

More recent researches in the 'socialization' domain point out to the natural situation about people passing through an assimilation process of their environment's values in

order to be in some degree ingrained into their individual values, for the sake of different goals, each one of which, has fed a theoretical approach: (1) model of socialization tactics; (2) uncertainty reduction theory; (3) social cognitive theory; and (4) cognitive and sense making theory (Saks, 1997).

In this sense, Cooper's (2006) study about socialization states that socialization can include in individuals, changes in or the development of new skills, knowledge, abilities, attitudes, values, and relationships, and the development of appropriate sense-making frameworks, where specially the point around values and attitudes are in the interest for this research.

For the purpose of this study, it is relevant to remark that when talking about the individual socialization within a cultural context, the individual is an employee in a workplace. Therefore, there is a double perspective of interest, first the individual socialization within his social setting, a process that can last all along a person's lifecycle. And second, the specific dynamics of socialization in a specific organization's workplace, an issue that has been studied by organizational socialization theories.

In fact, Cooper states that organizational socialization is important because employees need to learn how to function in their organization, which requires learning the organization's values, norms, resource networks and politics.

Based on these arguments, it is suggested that if previous research at collective level states, that certain cultural variables have an specific influence on employees' creativity,

then similar purposeful research at individual level, based on that previous research, could hypothesize that individuals that self-perceive their cultural values similar to the ones of the collectivity, will also have similar influences on their individual creativity, because of the socialization process.

In other words, it is suggested that when an individual, through a socialization process, assimilates an strongly individual's belief in key cultural values (of the environment), as long as these values guide certain patterns of behavior under specific conditions, it might be expected that effects on individual's creativity under the same specific conditions, to be similar to those researched at a collective level and who share those same values.

For the sake of simplicity in the lecture of this dissertation, herein after, the above arguments will be named as 'the process of individual socialization of the environment'.

As a matter conclusion, in next sections hypotheses will be argued based on the literature review of studies about the effect on creativity of environmental contexts (some of them developed at a group level of analysis). These arguments will reinforce hypotheses upon the assumption that individual cultural values derived from that environment, will produce the same effects on the individual creativity (so, at an individual level of analysis), due to 'the process of individual socialization of the environment'.

3.2. Perceived Employee Creativity

The aim of this study is to analyze how individual's cultural context variables affect the perceived employee creativity. For that reason it is necessary to define employee creativity according to the purpose of this study.

As we have explained in detail earlier in this study, at the beginning of chapter 2, there is an impressive number of theoretical approaches developed to explain the general concept of creativity (Sternberg and Lubart, 1996; 1999; Runco, 2004; Weisberg, 2006; Kozbelt, Beghetto and Runco, 2010; Glăveanu, 2010) and given such abundance of theoretical approaches there are also multiple definitions of creativity.

In the previous chapter, it was also explained that after reviewing seven definitions of creativity given by authors contributing to the Handbook of Creativity (Sternberg, 1999), Mayer (1999) concludes that "[t]he overarching definition of creativity seems to favor the idea that creativity involves the creation of new and useful products, including ideas and concrete objects". According to these definitions it follows that "creative people are those who create new and useful products, and creative cognitive processes occur whenever a new and useful product is created.".

Therefore, for the purpose of this study, employee creativity is defined as "the production of ideas that are both novel and useful in the workplace, emphasizing the meaning of production as 'the action of' production".

On the other hand, the diverse aforementioned theoretical approaches to the concept of creativity suggest that the 'action of producing' entails tangible (e.g. behaviors, attitudes) but also intangible aspects (e.g. cognitive processes) (e.g. Zhou, 2003; Amabile et al., 2004), what by their nature can mainly be observed and measured through perception, be it self-perception or through third-person's observation and perception.

3.3. National culture Dimensions

At a national level, the cultural make up can be characterized by using Hofstede's cultural dimensions (Hofstede, 1980, 1984, 1991, 2009). Hofstede defines these cultural dimensions as follows. Power Distance refers to the extent to which the less powerful members of organizations and institutions (like the family) expect and accept that power is distributed unequally. The Individualism-Collectivism dimension refers to the extent to which individuals are integrated into groups. Masculinity-Femininity refers to the extent in which society supports or not, the role of traditional male labor male achievements. The Uncertainty Avoidance dimension is a measure of risk aversion or of intolerance for uncertainty and ambiguity.

Hofstede's model was developed with the purpose of characterizing the cultural make-up of entire nations, but its applicability at a lower level such as the level of an organization or at an individual level has already been explained in the previous section.

The examination of how general cultural features of entire nations affect the creativity of its workforce would be therefore an interesting if not valuable endeavor. Rank et al. (2004) also support these arguments by highlighting that empirical studies revealed that Hofstede's cultural dimensions such as, uncertainty avoidance, power distance, masculinity and collectivism negatively relate to national levels of inventiveness. In addition, these authors mention that uncertainty avoidance negatively determines the endorsement of several innovation championing roles. Hofstede's values may differentially predict creativity and innovation. While low uncertainty avoidance, low power distance, high Femininity, and high individualism may positively relate to creativity, moderate levels of these values may facilitate the implementation of innovations advocated by higher level authorities.

Although the empirical evidence regarding the way culture affects creativity behavior in different geopolitical settings is scarce, evidence provided by entrepreneurship research establish a relationship between cultural values and the propensity of people to create and manage new business ventures. Some authors argue that there is a connection between creativity and entrepreneurship (Lessem, 1980; Gilad, 1984; Amabile, 1997; Florida, 2003; 2004; Lee, Florida and Acs, 2004). Entrepreneurship is essentially a creative endeavor as it involves the identification of market opportunities that would allow the creation of a surviving and successful business venture (Hisrich, Peters and Shepherd, 2005). Creativity is required not only in opportunity discovery and/or identification, but also in later stages of new-venture development (e.g. preparing the start-up, writing a convincing and appealing business plan, getting funding, attracting

new customers, designing and implementing marketing campaigns, etc.). Also, newly founded firms suffer from the liability of smallness and newness and, in order to succeed in such an adverse environment, entrepreneurs need to be creative enough to come up with bootstrap and unconventional techniques to overcome such disadvantages (Barringer and Ireland, 2008).Some authors argue that that entrepreneurial creativity is related even to the cultural and artistic creativity (Florida, 2004). In fact, Lee et al. (2004) found that some regions in USA that showed high levels of cultural activities, also showed high levels of entrepreneurial activity (start-up rates).

Entrepreneurship research also provides empirical evidence indicating differences among countries with respect to their level of entrepreneurial activity (startup rates and frequency). Empirical research in entrepreneurship provides evidence that some countries are more entrepreneurial than others and suggest that some national cultures are more supportive to entrepreneurship than others (e.g. Bosma and Levie, 2010; Kelly, Bosma and Amorós, 2011). It may therefore be the case that, at least to some extent, the national culture shapes the creative potential of individuals living within the same geographical space.

There are empirical studies in entrepreneurship that use Hofstede's cultural dimensions to compare differences between entrepreneurs and non-entrepreneurs across different countries (McGrath, McMillan, Scheinberg, 1992; Shane, 1992; Hofstede et al., 2004). These studies found that low uncertainty avoidance, low power distance, low masculinity and high individualism enhanced entrepreneurial activity.

3.3.1. Power Distance and Creativity

Power Distance, as defined by Hofstede (2001), refers to the extent to which the less powerful members of society accept and expect power to be unequally distributed. People in societies exhibiting a large degree of Power Distance accept a hierarchical order in which everybody has a place and which needs no further justification. In contrast, people in societies with low Power Distance, people strive to equalize the distribution of power and demand justification for inequalities of power.

Power Distance affects attitudes towards work supervision as well as the nature of superior-subordinate relationship both found by previous research as affecting employee creativity. In low power-distance cultures there is a limited dependence on superiors, the superior-subordinate relationships are consultative in nature and the control systems are based on trust. Such contexts encourage autonomy, agility and adaptability (Hofstede and Hofstede, 2005) which in turn may lead to higher levels of creativity – as higher levels of autonomy and independence stimulate intrinsic motivation which in turn fosters creativity (Amabile, 1996).

In contrast, high power-distance cultures are characterized by having a centralized authority, rigid control systems and close monitoring of individuals and their work (Zhou, 2003, George and Zhou, 2001). Such societies are hierarchical and bureaucratic, features considered to constrain independence and autonomy (Hirst et al., 2011) and to limit the free flow of knowledge that fosters creativity (Rodan and Galunic, 2004). People in high Power Distance cultures are expected to follow instructions given by

superiors, a condition that constrains the expression of unique personal ideas (Erez, 2010; Gelfand, et al. 2011; Harzing and Hofstede, 1996). Hence, high power distance may negatively affect the level of novelty and creativity (Bechtoldt et al, 2010; Kasof et al., 2007; Westwood and Low, 2003).

A good example in this sense is provided by Nouri et al (2014) that explain how "when an employee from a high power distance culture performs an idea generation task under a supervisor, (s)he will defer to the common norm of adherence to rules and norms as expected, refraining from generating novel ideas that deviate from the norm (Gelfand, Lim, and Raver, 2004; Savani, Morris, and Naidu, 2012). In contrast, these employees are likely to elaborate more on their ideas to ensure that their supervisor considers their ideas to be appropriate and relevant (Chen and Miller, 2011). Working under a supervisor or with peers in a low power distance culture is not likely to activate concerns about expressing novel ideas. Hence, the context of having a supervisor has a differential effect on creativity, depending on the cultural values. "

Based on the above arguments individuals belonging to high Power Distance culture are expected to score lower on creativity. Thus, and taking into account the 'process of individual socialization of the environment' explained in section 3.1.2, our hypothesis proses that:

H1. There is a negative relationship between the Power Distance of the employee at individual level and the perceived employee creativity.

3.3.2. Collectivism – Individualism and Creativity

The cultural dimension Collectivism - Individualism describes the relationship between the individual and collectivity that prevails in a given society. This dimension reflects if people's self-image is defined in terms of I or We. and it has many implications for values and behaviors (Hofstede, 2001). In individualistic societies, people are expected to take care only of themselves and their immediate families. In collectivistic societies individuals can expect their relatives or members of a particular in-group to look after them in exchange for unquestioning loyalty.

As pointed out by Nouri et al. (2014) collectivistic values include conformity and traditionalism (Schwartz, 2006) rather than the creativity-associated values of self-direction and stimulation (Mok and Morris, 2010). In collectivistic societies, members are integrated from birth into strong, cohesive in-groups that protect members in exchange for unquestioning loyalty and conformity to the group's norms (Hofstede, 2001). As a result, collectivism emphasizes consensus and group harmony, values that prevent the members of collectivist cultures from generating and expressing unique ideas that would constitute a deviation from the norm (Chen and Miller, 2011).

Individualistic cultures are expected to foster creativity in a greater extent than collectivistic ones. The rationale is based on the idea that individualistic cultures value non-conformity and deviance, both conducive to divergent thinking (Goncalo and Staw, 2006). Divergent thinking is considered as an important ingredient of the creative process (Runco, 1993; Baer, 2014). Different studies scored Spain as a collectivist

culture (Hofstede, 1980; Sauquet, 2003). In this study, Spanish organizations represent the target sample, so for the purpose of this study, and taking into account the 'process of individual socialization of the environment' explained in section 3.1.2, the following hypothesis is stated:

H2. There is a negative relationship between the Collectivism of the employee at individual level and the perceived employee creativity.

3.3.3. Uncertainty Avoidance and Creativity

Uncertainty avoidance reflects the degree to which the members of society feel uncomfortable with uncertainty and ambiguity. According to Hofstede (2001) people in strong Uncertainty Avoidance cultures maintain rigid codes of belief and behaviour and are intolerant of unorthodox behaviour and ideas. In contrast, people in weak Uncertainty Avoidance societies maintain a more relaxed attitude in which practice counts more than principles.

Erez and Nouri (2010) point out that in a strong Uncertainty Avoidance society, rules and strict procedures are maintained in order to reduce ambiguity. However, rigidity in rules and standards restricts improvisation and novelty. On the other hand, low uncertainty avoidance encourages exploration and experimentation. Yet, the lack of clear standards and procedures may make task implementation difficult. Low

uncertainty avoidance encourages exploration, which is necessary for generating novel ideas, whereas high uncertainty avoidance hinders exploration and constrains the novelty aspect of creativity.

Previous research on creativity established a relationship between Uncertainty Avoidance and creativity. High tolerance for ambiguity (low Uncertainty Avoidance) is associated with risk-taking, tolerance for mistakes and low bureaucracy, all found as encouraging exploration and new ideas (Miron, Erez and Naveh, 2004; O'Reilly, Chatman and Cladwell, 1991). So, it would be expected for individuals from low Uncertainty Avoidance cultures to score higher on creativity. One explanation is based on the relationship discussed in creativity research between the type of problem (well versus ill defined problems) and creativity. According to Amabile (1996) well defined problems constrain the ability to break out from existing rules and procedures and thus, limit creativity. By contrast, ill-defined problems encourage risk taking and breaking away from the rules to experiment with new ways of doing things. Hence, ill-defined problems may enhance creativity.

By encouraging risk taking (Madjar, Greenberg and Cheng, 2011), ill-defined problems are associated with low Uncertainty Avoidance as it encourages breaking away from existing rules and norms to experiment of new ways of doing things (Amabile, 1983) and, hence, enhancing.

Erez and Nouri (2010) point out that similar to the effect of Power Distance, cultures that emphasize Uncertainty Avoidance may restrain individuals deviating from the

norm, a behavior considered necessary to discover new ideas. Thus, and taking into account the 'process of individual socialization of the environment' explained in section 3.1.2, the following hypothesis is stated:

H3. There is a negative relationship between the Uncertainty Avoidance of the employee at individual level and the perceived employee creativity.

3.3.4. Femininity – Masculinity and Creativity

Masculinity is defined as the extent to society supports or not, the role of traditional male labor male achievements, according to Hofstede (1994), where a high level indicates a high degree of separation gender, while a low level indicates that society has a low level of segregation and gender discrimination.

Previous empirical researches' findings are controversial about the relationship between the Femininity vs Masculinity dimension and Creativity.

Hofstede's (2001) has shown that the culture value of masculinity is related to two organizational characteristics common to organizational creativity: rewards and recognition for performance, and training and improvement of the individual. Research has shown that creative managers are motivated by financial rewards, prestige and sense of accomplishment (Gee and Tyler, 1976). Jones and Davis (2000) argument suggests that positive innovative outcomes are more likely in cultures with high individualism,

low power distance, weak uncertainty avoidance and high to moderate masculinity. In the same line, Kedia et al. (1992) claim that R&D productivity is higher in low POWER DISTANCE and masculine cultures, as it is supposed that it allows individuals to challenge the status quo through being exploratory and creative.

However, it has also been proposed that masculinity has no effect on economic creativity of a country (Williams and McGuire, 2010). This proposition is also confirmed by some of the empirical evidence. Shane (1992) demonstrated that masculinity has no effect on the number of trademarks per capita. Steensma et al. (2000) found that small and medium-size firms in a country with a highly masculine culture are less likely to use alliances for technological innovation. This might limit the access to novel knowledge and could go against their creative productivity.

Furthermore, there are some possible influences that have to be taken into account. A feminine culture society has a stronger emphasis on 'support culture' in their organizations. A warm culture, low conflict, trust and socio-emotional support help employees to cope with the uncertainty related to new ideas (Nakata and Sivakumar, 1996). This kind of culture might stimulate creativity, because the feminine culture offers satisfaction through relationships, mutuality, belonging and connection, trust and helping each other, people communicating well and constructively challenging each other's work. In Abridah's (2012) empirical research, the Spanish company (Repsol) was significantly high in support culture, and Spain scored the lowest compared to other countries in the masculinity dimension, which would suggest that Spain (according to

this sample) is a more feminine society, that is the same conclusion of Hofstede's (2001) researches. Spanish organizations are the target sample of this study. So, for the purpose of this study, and taking into account the 'process of individual socialization of the environment' explained in section 3.1.2, the following hypothesis is stated:

H4. There is a negative relationship between the Masculinity of the employee at individual level and the perceived employee creativity.

3.4. Organizational characteristics and employee creativity

Empirical research has examined relationships between certain organizational characteristics and employee creativity. The rationale is, as pointed out in Shalley and Gilson (2004), that along with certain individual characteristics, creativity also requires some level of internal, sustaining forces that pushes individuals to persevere in faces of challenges inherent to creative work. For the empirical part of this dissertation the following organizational factors are examined as having the potential to affect employees' creativity: (1) organizational control and structure; (2) supportive communication; (3); risk-taking orientation; and (4) workplace atmosphere.

3.4.1. Organizational control & structure, and creativity

Structure, hierarchy and control represent a group of variables from an organizational context that is suggested to influence creativity in organizations. For instance, according to Ryhammar and Smith (1999), the way in which the organization is structured is one critical organizational influence on creativity (Runco, 2007). Empirical research has shown that the organizational structure of a company has the potential to affect employees' creativity (Amabile, 1996; Ekvall, 1996; Shalley, Gilson and Blum, 2000; Shalley and Gilson, 2004; Shalley et al., 2004; Rice, 2006; Hunter, Bedell and Mumford, 2007) with certain structures being more conducive to creativity than others. Burn and Stalker (1961) distinguish between mechanistic and organic structures and suggested that these organizational structures influence innovation and change within organizations (Damanpour and Schneider, 2006). This assertion has been put to trial in different context. For example, Rezaee et al. (2014) looked at differences in creativity by organizational structure in teaching hospitals and found a positive correlation between organic structures and organizational creativity.

Some empirical studies have established a relationship between creativity and organizational structures that promote open and ongoing contact with third parties external to the organizations and information seeking from various sources (e.g. Ancona and Cladwell, 1992; Dougherty and Hardy, 1996). The literature on creativity suggests that a flat, decentralized and flexible culture is generally considered to be supportive of creative action (Nonaka, 2007). In general, the presence of organizational structures, procedures and processess that enable creativity enhance individual creative efforts

(Amabile, 1988; Cummings and Oldham, 1997). Martins and Treblanche (2003) indicate that a flat structure facilitates decision making across different functional areas by granting more autonomy and by enabling the access to top management. We therefore expect employees to be more creative when working in a flat organizational structure.

A similar relationship is expected in the case of the level of control and hierarchy. For example, Hage and Aiken (1969) found a negative relationship between authority and innovativeness, with more authoritarian organizations being less innovative. The studies conducted by Amabile and Gryskiewiecz (1987) and Amabile (1998) also indicate that job freedom and minimal formalization and constraints are enhancing creativity. As discussed in Arad, Hanson and Schneider (1997) empirical research provides evidence that indicates that the degree to which employees have freedom and authority to participate in decision making and problem solving is positively related to the level of creativity and innovation in an organization. So, and taking into account the 'process of individual socialization of the environment' explained in section 3.1.2, the following hypothesis is stated:

> H5. There is a negative relationship between organizational contexts that reflect a structure of controlling and a hierarchical environment to the employee at individual level and the perceived employee creativity.

3.4.2. Supportive communication and creativity

Supportive communication from supervisors and/or co-workers also represents a second group of variables from an organizational context that is suggested to influence creativity in organizations. For instance, style of supervision has been long considered an important factor of the organizational context with an influence on employee creativity (Amabile & Gryskiewicz, 1987, 1989; West & Farr, 1989). In fact, supervision that is supportive is expected to promote creative achievements of the employee, whilst supervision that is mostly based on controlling, giving feed-back just in order to focus employees in the direction decided by supervisors, is expected to influence negatively on employee creativity (Deci & Ryan, 1987; Deci et al., 1989). The support provided by immediate supervisors exerts an influence on subordinates' creativity through direct help with the project, the development of subordinate expertise, and the enhancement of subordinate intrinsic motivation (Amabile et al., 2004). Empirical studies that examine the relationship between leadership style and creativity provide some support in this sense. For example, Shin and Zhou (2003) found a positive relationship between transformational leadership and creativity. Similar results were obtained by Frese, Teng and Wijnen (1999) who demonstrated that supervisor encouragement positively affected the number of ideas generated by employees.

Of special interest for this study is the relationship that Oldham and Cummings (1996) makes of supportive supervisory with the promotion in employees, of feelings of self-determination and personal initiative at work, a feeling that has similarities to the Schwartz's (1994) value category Self-direction, which Rice (2006) related with

employee creativity. Also Shalley and Gilson (2004) studied the influence of supervisory support and creativity stating that it has been relatively well established in the literature, and that studies also have indicated that the results for supportive supervision can vary for those with different personality characteristics or cognitive styles. For instance, Tierney et al. (1999) found that employees' intrinsic motivation, and cognitive style, all affected creativity.

Rice (2006) and Shalley (2004) suggest that coworkers are also a significant factor influencing the support, interaction, and communication environment.

Co-workers' support are expected to have a similar effect on employees' intrinsic motivation and creative potential as in the case of supervisory support, previously discussed. When their colleagues show a nurturing and supportive behavior, employees are expected to exhibit high levels of creativity. Similar effect is found in entrepreneurship collaborations on digital platforms (Gloor, 2005). Lower levels of creativity are expected in the case of competitive, non-supportive co-workers that undermine one's intrinsic motivation towards a creative task (Shalley et al., 2004). Nonetheless, the extant empirical evidence on this matter is mixed and unconclusive. For example, Zhou and George (2003) obtained results indicative of a positive relationship between employee creativity and coworker support and informational feedback. Similarly, Amabile (1996) found that individuals in work teams were more creative when their coworkers were encouraging and supportive. However, studies like Shalley and Oldham (1997) showed that competing individuals generated more creative

ideas than those who were not in competition, whereas George and Zhou (2001) found no statistically significant relations between employee creativity and support provided by co-workers.

In summary, and taking into account the 'process of individual socialization of the environment' explained in section 3.1.2, we therefore expect a similar relationship between supportive communication and employee creativity.

> H6. There is a positive relationship of organizational contexts reflecting higher levels of supportive communication to the employee at individual level and the perceived employee creativity.

3.4.3. Risk taking orientation and creativity

Risk taking orientation, for the purpose of this study, is conceived as one characteristic of an organizational context that encourages attitudes of the type of doing things in a different way. It is generally held that a certain degree of risk taking is essential in order to explore and produce creative ideas. Dewett (2006) argues that creative behavior requires an employee to be willing to engage risk, and aside from the discussion of risk propensity as an individual difference, he developed and tested a new situational variable: willingness to take risks (WTR), emphasizing the "knowledge-doing gap" in organizations, as a void where no action is taken based on acquired knowledge due to

the salience of risk, and where a vital prescription for success is to drive out fear from the organization. As Shalley (2004) states, creativity inherently involves risks and it is inherent in a process of trial and error, where failure is something that will happen continuously along with success. If an employee is risk averse, then it's more common for him to engage in routine tasks better than in creative ones.

Creativity is considered to involve risk taking, pressure, stimulation and challenges. Building upon the research by Amabile (1988), Woodman et al. (1993) hypothesized that individual creative performance would be enhanced by a risk-taking context. And according to Rothwell and Wisseman's (1986) analysis, there are nine cultural factors that affect the adoption of a new idea; particularly, factors such as risk taking and long-term orientation can have a direct effect on creativity. If leaders value and want employees to be creative, a critical contextual factor they need to attend to is fostering an environment where risk taking is encouraged and uncertainty is not avoided (Shalley, 2004).

Lampikoski and Emden (1996) suggest that individualistic values such as personal achievement, risk taking and entrepreneurism have contributed to Western creativity, what could be opposed to collectivist values in Japan, that result in strong group orientation and conformity, provoking a certain discouragement on the development of creative ideas. According to Jones and Davis (2000), weak UA, involving a degree of risk taking, is more favored by the creativity process.

Dewett (2004, 2007) points out that people vary in their propensity towards risk, with some people being more motivated to avoid failure than to achieve success. At an organizational level, risk-aversion and fear of failure are thought as barriers to innovation (Basadur, 1995; Altshuler & Behn, 1997; Maher and Plsek, 2009).

Therefore, and taking into account the 'process of individual socialization of the environment' explained in section 3.1.2, we expect a negative relationship between risk-aversion and employee creativity.

> H7. There is a positive relationship of organizational contexts with higher levels of risk-taking of the employee at individual level and the perceived employee creativity.

3.4.4 Workplace atmosphere and creativity

Finally, organizational contexts that involve a trust and a caring atmosphere in the workplace can also enhance or inhibit employees' creativity (Von Krogh et al., 2000; Rice, 2006).

Wheatley (1999) explains positive affect in terms of the energy that flows through an organization via healthy relationships: relationships where people listen and speak honestly to one another, work well with diverse members, are trusted with information,

and honor collaborative efforts. In such environments, positive energy results in increased productivity, personal satisfaction, and creativity.

The 'creative climate' is a term coined by Ekvall (1996) in defining how an organisation's culture manifests itself in the creative output from its employees. Some of the ten factors that are listed that collectively describe the creative climate of the organization are: challenge, freedom, trust/openness, dynamism/liveliness, playfulness/humour, or debates. All of them describe a certain atmosphere, named by Ekvall as a creative climate.

Hall (1996) points out that encouraging an atmosphere of enjoyment and fun can enhance creative thinking. Other authors indicate that having a relaxed and playful atmosphere in the workplace can also enhance creative thinking (McFadzean, 1998). US empirical research provides evidence indicating that supportive communication among employees and a caring atmosphere stimulates employees creativity (Oldham and Cummings, 1996; Shalley and Perry-Smith, 2001; Zhou, 2003). As highlighted in George and Zhou (2001) when the work environment is negative, coworkers provide no encouragement or support for creativity and may actually inhibit it. In the same vein, and taking into account the process of individual socialization of the environment explained in section 3.1.2, we hypothesize a positive relationship between workplace atmosphere and employee creativity.

H8. There is a positive relationship of organizational contexts reflecting a fun, trusting and caring atmosphere to the employee at individual level and the perceived employee creativity.

3.5. Individual values and employee creativity

As mentioned earlier, individual (most intrinsic) values are also included in our conceptual model. One framework useful in examining individual values is Schwartz's (1994) value structure theory. This theory is useful both in understanding individual's values and in understanding culture. Schwartz conducted a wide survey with over 60,000 people to identify common values that acted as guiding principles for one's life. This research led to the identification of ten value types that gather multiple values into a single category.

Drawing on Rice (2006) who used Schwartz's individual value theory to examine the creativity of Egyptian employees, this study takes into consideration the following individual values as potentially affecting the creativity of employees in Spanish firms: (1) self-direction, stimulation and achievement, (2) power, and conformity.

3.5.1. Self-direction, stimulation, achievement and Creativity

Schwartz's (1994) motivational types of values stated the following defining goals and the selection of value items, that later Rice (2006) hypothesized to be related with creativity.

Self-direction value type represents a defining goal of independent thought and action to choosing, creating, and exploring. Its values selection includes Creativity, Freedom, Choosing own goals, Curious, Independent. Close to former goals, research in creativity provides evidence suggestive of an increased creative potential in the case of individuals that show higher levels of curiosity and persistent interest (Mills and Cameron, 1993). Researchers have identified a set of core personality traits that are reasonably stable across fields and result in some individuals being more creative than others (Barron & Harrington, 1981; Gough, 1979), where these traits include broad interests, independence of judgment, autonomy, and a firm sense of self as creative (Shalley, 2004).

Stimulation value type represents a defining goal of excitement, novelty, challenge in life. Its values selection would include A varied life, An exciting life, and Daring (Schwartz,1994). In fact, this value type might be related with the joy of exploration or openness to experience, that measures interest in unconventional ways of doing things (Rice, 2006). According to Costa and McCrae (1995), the factors most associated with

creativity are conscientiousness and openness to experience. The relationship between creativity, openness to experience, and divergent thinking was supported in several other studies as well (Carson et al., 2003; Peterson & Carson, 2000). George and Zhou (2001) explored creativity with employees, and results indicated that higher conscientiousness was related to lower levels of creativity and that those individuals with higher levels of openness to experience exhibited characteristics associated with creativity (e.g., curiosity, flexibility, imaginativeness, openness to change, and unconventional ideas). Employees with lower openness have been found to be more rigid and conventional in other studies as well (Feist, 1998).

Achievement value type represents a defining goal of personal success through demonstrating competence according to social standards. Its values selection would include Ambitious, Successful, Capable, and influential (Schwartz,1994). Empirical evidence on creativity suggests that creative people show a strong achievement motive (Rice, 2006), where these people are independent and follow their own ideas drove by their ambitions, not being overtly concerned about social expectations and norms regarding their behavior (Mumford, 2000).

In summary, and taking into account the 'process of individual socialization of the environment' explained in section 3.1.2, self-direction, stimulation and achievement value types are expected to have a positive impact on employee creativity. So, it is hypothesized that:

H9. There is a positive relationship between Self-direction individual value of the employee and the perceived employee creativity.

H10. There is a positive relationship between Stimulation individual value of the employee and the perceived employee creativity.

H11. There is a positive relationship between Achievement individual value of the employee and the perceived employee creativity.

3.5.2. Conformity, Power and Creativity

Besides the aforementioned values, Schwartz's motivational types of values stated following defining goals and the selection of value items that Rice (2006) hypothesized to be related with creativity.

Conformity value type represents a defining goal of restraint of actions, inclinations and impulses likely to upset or harm others and violate social expectations or norms. Its values selection would include Obedient, Self-discipline, Politeness, Honoring parents and elders (Schwartz, 1994). Conformity was found by previous research as a factor that inhibits creativity (Amabile, 1996). One of the most widely used and respected measures of the creative personality is Gough's Creative Personality Scale (Gough, 1979) where the items included are consistent with the core personal characteristics as correlates of creativity. In it, low scorers of this measure endorse words like conventional and narrow interests, whose meanings are similar to these values.

Power value type represents a defining goal of social status and prestige, control or dominance over people and resources. Its values selection would include Authority, Wealth, Social power (Schwartz,1994). Regarding these individual values, they might relate intimately to the motivational factors that make people be more or less creative. Amabile (1996) characterize extrinsic motivation as being outwardly oriented (motivated by recognition and sensitive to others' opinions of one's work and ideas) and being motivated by compensation. As pointed out by Rice (2006) a negative relationship would be expected between employee creativity and Power value type given its defining goals (i.e. social status and prestige) which are typical of an outward orientation (extrinsic). This would be supported by empirical research on creativity that provides evidence suggesting that creativity is stimulated through intrinsic motivation (completing a task for its own sake) rather than extrinsic motivation (completing a task for external rewards such as monetary compensation). In fact, when formulating his systems model of creativity Csikszentmihalyi (2014) point out that a great deal of intrinsic motivation is needed to energize the person to absorb the relevant memes an idea, behavior or style that spreads from person to person within a culture and to persevere in the risky process of innovation. So, this type of motivation would be the opposite to the one related with Power value type.

In summary, and taking into account the 'process of individual socialization of the environment' explained in section 3.1.2, it is hypothesized that:

H12. There is a negative relationship between Conformity individual value of the employee and the perceived employee creativity.

H13. There is a negative relationship between Power individual value of the employee and the perceived employee creativity.

Figure 3.3. exhibits a graphical formulation of our theoretical model and the direction of

relationship between the different variables discussed above, and Employee creativity.

Figure 3.3. Empirical model
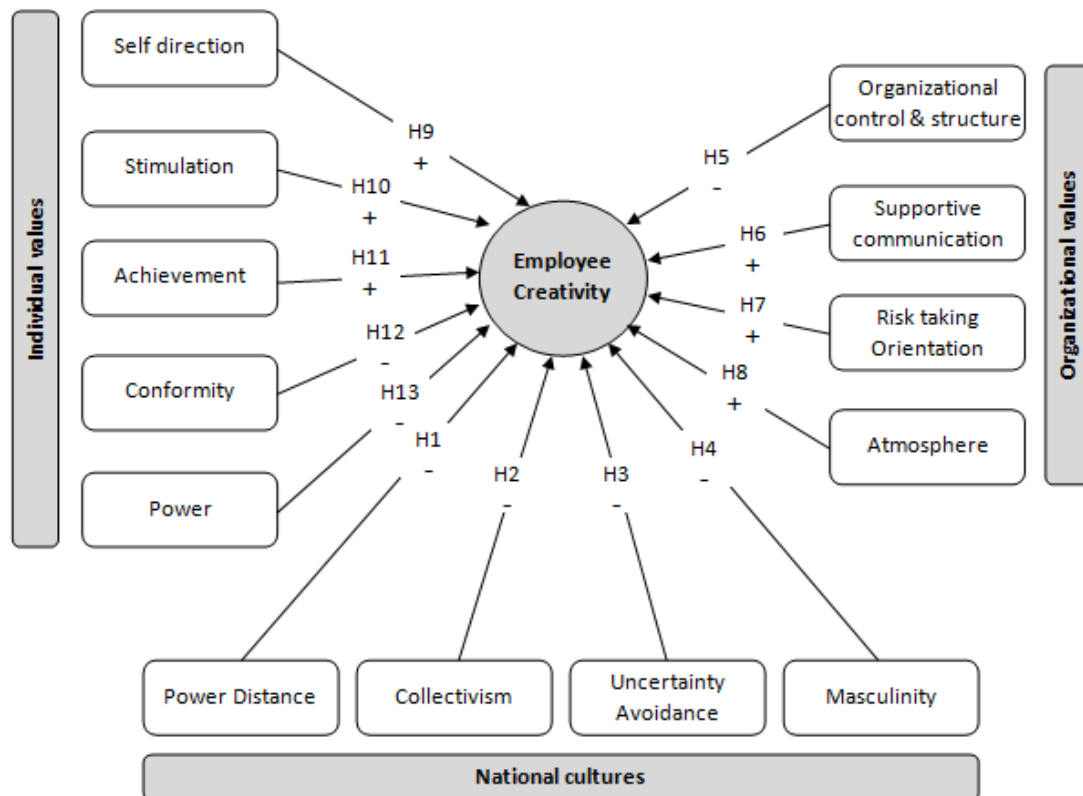
Source: Self devised

3.6. Chapter Summary

In this chapter we have provided a discussion about the concepts of culture and cultural values and how these relate to employee creativity. This discussion was also the basis for hypotheses and empirical model formulation.

Culture, as defined by Hofstede (2001) is "the collective programming of the mind that distinguishes the members of one group category of people from another". In the same way personality determines the uniqueness of an individual, culture determines the uniqueness of a human group. Hence, in addition to his or her personality, each individual, and therefore employee, is also programmed by the culture(s) in which he or she is born and lives (including subcultures such as those developed within organizations). Culture mold individuals and their actions through the cultural values they provide people with. The cultural values are core components of culture and represent ideas about what is good, right, fair and just. On the other hand, there is some empirical research that indicates a relationship between employees' individual values and creativity (e.g. Rice, 2006). By affecting their behavior in the workplace, individual values may also have a direct effect on their creativity.

In this dissertation we distinguish among three categories of cultural effects on employees' creativity. First, the effect of the broader, national culture on employee creativity is considered. To this end, we employ four Hofstede's cultural dimensions, Power Distance, Uncertainty Avoidance, Collectivism and Masculinity, all of them at an

individual level of analysis, that are expected to have a negative relationship on employees' creativity.

In addition to country level cultural dimensions, we also consider the culture of the organization itself and how this may affect employee's creativity. This is done by examining the effect of selected dimensions proposed in previous research as makers and influencers of the organizational context. Such dimensions refer to the level of control and structure (hierarchy), supportive communication through supervisors and co-workers support, risk-taking propensity and atmosphere. Of these dimensions (all of them at an individual level of analysis), the first is hypothesized to have a negative effect on creativity while for the rest, positive relationships are expected.

In the individual dimension, drawing on Schwartz's (1994) individual values theory, we selected self-direction, stimulation, and achievement – for which positive relationships with employee creativity are expected - and, conformity and power which are expected to exert a negative effect on employee creativity.

Chapter 4 – Empirical method

4.1. Research design

The main objective of this research is to provide empirical evidence regarding the relationship between culture and creativity at work, through a set of hypotheses to demonstrate that culture has a significant influence on the employee creativity (EC). The effect of culture on EC is examined employing a multidimensional model that takes into account culture imprints at three distinct domains: national, organizational and individual.

To conduct a research, it is necessary to use a well defined methodology based on scientific principles (Eldabi et al., 2002).To choose a specific method will depend on the research paradigm followed by the researcher. Methodology itself can't be chosen in a vacuum and it should be related to the knowledge domain of the investigation (Venkatesh and Dhokalia, 1986). Nasif (1991) defines as cross-cultural research any investigation where culture is its main dependent or independent variable. So this research focused on culture variables as those of Hofstede (1980) and Schwartz (1994), conducted between different cultural boundaries, can be considered as cross-cultural. As Abridah (2012) states, most cross-cultural research is based on a realistic perspective and adopts a positivistic/analytical research strategy, and as Collis and Hussey (2003) indicate, there are two main paradigms from which a research design can be derived from: positivism and phenomenology, where positivism implies quantitative, scientific,

experimentalist and traditionalist approach; and the latter implying the qualitative, humanistic, interpretivist and social constructionism approach.

A different perspective to helping reinforce the choice of the right methodology, would be the rationale upon which the first stage of a research project is to transform the purpose of the research into the following three questions: What? How? and Why? The first of these questions describes a phenomenon. That is why the most appropriate method to obtain an answer is case study. "How" tries to analyze a process. To answer this type of questions most researches use a descriptive study. Lastly, "Why" requires a wider analysis, and usually it is investigated by an empirical study (Yin, 1994).

Given that the aim of this research is to analyze "why" individual, organizational and cultural characteristics could explain the employee creativity, the suitable methodology that should be used is empirical research.

As a consequence of the above rationales, and taken into account that this study aims to determine the relationships between the variables of the proposed conceptual model, the quantitative approach is the one selected.

4.2. Sample description

The main domain of this study is organizational creativity, and in particular the study of employees' creativity and the influence of their cultural contexts at an individual level.

So, to reach the objectives of this thesis, it was surveyed a total of 198 employees (pertaining to 10 Spanish companies from different sectors). In each case, questionnaires were used for employees, in order to assess the influence of the cultural environment at work. Managers were asked on their perceptions on their employees' creativity, as a validation point (this will be explained in detail in next section).

A sample is defined by Sekaran (2003) as a subgroup of the researched population. When this population is smaller than 500 (Easterby-Smith et al., 2002) then it is used to do a census sample, it means 100 per cent of the sample. As the population of this study is bigger, then a sample of 198 employees has been selected, based on the limitations of the researcher of direct access into 10 organizations in order to use (as later explained) a self-administered questionnaire.

The choice of an appropriate sample is a precursor to being able to generalize results on a population. That is, the sample should be considered representative of a population in order to be generalized. Taking into account that the purpose of this study is bounded by Spain's cultural settings, the potential population of employees to show creativity would be the approximately the number of active employees in the country (18.048.700 employees according to the Instituto Nacional de Estadística of Spain, 2015),

diminishing the number of managers within that number. Thus, given the size of our sample (198 employees) and also the fact that they were not chosen randomly (among the entire population), but based on the possibilities of access of the author to some organizations, it should be stated that this sample is by no means representative of the entire population, and in consequence, this study will specifically provide empirical evidence from 198 employees (pertaining to 10 Spanish organizations) on the purpose of this research.

The organizations were selected, within the access possibilities of the author, to represent public and mainly private sector firms as one factor of diversity; industrial, technological and service firms as a second factor; small, medium and big enterprise as a third factor of diversity. In all cases, questionnaires were self-distributed to an specific area of the 10 organizations, so that this could ease the access to the manager (supervisor) on charge of this area. This diversity was planned in order to minimize the bias produced by working within a single sector that might reflect a commonality in EC based on a set of values, beliefs and behaviors, all of them potentially shared at a certain degree by the professional practices and jargons acquired by employees in an specific mature sector.

Concretely, the 10 organizations are in the sector or type of activity of, (1) public administration, (2) chemical industry, (1) food manufacturing, (1) pharmaceuticals, (1) telecommunications, (1) hostelry, (1) healthcare services, (1) consulting services, and (1) tourism sector

Within each of the 10 companies surveyed, it was targeted a small unit resulting an average of 20 participants per unit (in some cases, there were 2 units surveyed with a lower number of participants) easing the task of the researcher in a twofold sense: 1) possibility to use a self-administered questionnaire, and 2) link the self-perception of every employee, with the perception of its manager or supervisor.

The questionnaires were conducted during the first semester of 2015. All participating organizations agreed in advance with the researcher to collect data for academic research. Participants were selected randomly by managers. Questionnaires were self-distributed to employees and managers.

All managers possessed college. Employees spanned from high to low degrees of education, but in all cases, and based on the specific sectors targeted, it is supposed that most of the employees are creative (although it might not imply to show creativity in their workplaces). In all cases, all the employees surveyed were working in the company during more than one year in order to assure that they were known by managers at a certain degree, and thus, managers could be surveyed about the employee creativity.

4.3. Procedures and data collection

Data collection can be based, in general terms, mainly on primary and/or secondary sources. This research is based on primary data, with a quantitative approach, conducted by a self-administered questionnaire survey on 10 cross-sector and cross-purpose Spanish organizations, during the first semester of 2015.

A total of 396 self-completion questionnaires were validated among those self-administered. From those, 198 questionnaires were distributed to employees of the 10 organizations. Next, 198 questionnaires were distributed among their 12 managers (as a point of validation) in order to score the EC of each one of their employees, and so acting as a third-person observation assessment. A copy of both questionnaires is provided in Appendixes 1 and 2.

A self-administered survey entails multiple advantages in front of other alternatives as emailing, telephone surveys and others (Abridah, 2012). These advantages comprise among others, a direct contact with respondents and their supervisors, the opportunity to previously clarify certain concepts or questions, a sample correctly targeted, and the possibility to link employee surveys to supervisor ones, persuading respondents to fill in forms identifying themselves with their own name, under the promise of confidentiality outside their company and the use of data just at an aggregated form. Among the possible disadvantages could be found a possible influence from the interviewer, but it

was diminished by the fact that this interviewer had an experimented background around it.

As of the time dimension, Cooper and Schindler (2006) suggest that research can be classified as a cross-sectional study or as a longitudinal study. Thus, surveys in this study should be considered cross-sectional as all the data gathered represent a snapshot of just one point in time. Of course, a longitudinal study might be of great interest to enrich data and interpretation of results, but due to company access limitations, it is considered out of the scope of this study, as will be explained later in the section of Future research. All the same, Sekaran (2003) suggests that studies can be classified as 'causal' when its aim is to define variables that are the cause of one or more problems, or 'correlational' when its aim is to define which are the important variables associated with the problem. From this perspective this study should be considered as a correlational one.

The questionnaire was translated from the original English language of the measurement instruments to Spanish, and it was reviewed through 3 focus groups, each one dedicated to one of the 3 measurement instruments of the groups of independent variables (Hofstede's variables, organizational context, and Schwartz's individual values). One of these focus groups was also leveraged to review the measurement instrument of the dependent variable EC. All commentaries were processed to get a revised edition to be used in the pilot study. Next, the pilot study was developed in 2014 with 2 organizations: a pharmaceutical medium size company with 47 participants from

a functional department, and a real state small size company with 54 participants. Variable's statistical analysis was examined and consequently, when necessary, questions were confirmed, reformulated or eliminated. As a result, it was obtained a first valid version of the questionnaire. Nevertheless, these participants didn't participate in the final sample of this study, to avoid possible bias due to their prior participation, so these 2 organizations weren't part of the 10 organizations that eventually were surveyed with the whole questionnaire.

The steps followed for data collection are summarized in table 4.3.1:

Table 4.3.1. Steps followed for data collection

Step	Description
1	Translation from English to Spanish (when necessary) of measures instruments
2	Focus groups to review questions and rewording
3	Test pilot of questionnaires with 2 organizations, for final rewording, questions review and questions elimination
4	Companies sample
5	396 questionnaires self-distributed
6	Test of the hypothesis
7	Relationships between cultural variables and EC

Source: Self devised

4.5. Variables and measures

Questionnaires as a list of structured questions are considered some of the most popular method for data collection. As previously explained it has been used a positivistic approach that in fact suggests close-ended questions.

Participants answered questions of their self-perceptions around topics as Creative Employee Behavior, Power Distance, Uncertainty Avoidance, Collectivism vs Individualism, Femininity vs Masculinity, Organizational control and structure, Supportive communication, Risk-taking orientation, Atmosphere, Self-direction, Stimulation, Achievement, Power and Conformity.

4.5.1. Perceived Employee Creativity

For the purpose of this study, in our empirical model in Chapter 3, the dependent variable was defined as "the perceived production of ideas that are both novel and useful in the workplace, emphasizing the meaning of production as 'the action of' production". And it was suggested that the 'action of producing' entailed tangible (e.g. behaviors, attitudes) but also intangible aspects (e.g. cognitive processes) that by their nature should mainly be observed and measured through perception.

As mentioned in chapter 1, previous research have examined the effect on creativity of individual characteristics such as personality, cognitive styles, creativity relevant skills, experience and motivation (e.g. Amabile, 1983, 1996, 2000; Woodman et al., 1993;

Scott and Bruce, 1994; Oldham and Cummings, 1996; Mumford et al., 1997; Reiter-Palmon et al., 1997; Shalley and Oldham, 1997; Tierney, Farmer and Graen, 1999; Vincent, Decker and Mumford, 2002). Some of these individual characteristics are based on action of (production)-related attributes such as, types of processes (e.g. cognitive styles), or types of behaviors (e.g. showing curiosity or open mind), among others. So, to measure the perceived employee creativity, this study suggests to using instruments designed to measure some of the above mentioned individual characteristics as it's the case of behaviors.

In this respect, Rice (2006) in his study about the influence of individual values on the self-perceived employee creativity, developed an instrument to measure some employees' creative behaviors, based on previous research focused on the perspective of creativity and individual characteristics (Amabile et al., 1996; Ganesan and Weitz, 1996; Mumford and Gustafson, 1988; Oliver and Anderson, 1994). For instance, Ganesan (1996) in his study about intrinsic motivation and creativity of retail employees, stated that intrinsic motivation stimulates a desire to master the job... want to know how to do it better ... Thus they (the employees) are likely to explore new and innovative approaches. Based on that, Rice designed (see table 4.5.1) the item 'I experiment with new approaches to doing my job' as an specific creative behavior to measure the self-perceived employee creativity. Thus, this researcher used this questionnaire that includes a list of items as follows in the next table:

Table 4.5.1. Employee's creative behavior — Likert scale items and sources

Number	Likert scale item[a]	Source(s)
Q1	My boss feels that I am creative in my job	Ganesan and Weitz (1996)
Q2	I experiment with new approaches to doing my job	Adapted from Ganesan and Weitz (1996)
Q3	I am on the lookout for new ideas from all the people with whom I interact as part of my job	Adapted from Ganesan and Weitz (1996)
Q4	I believe that I am currently very creative in my work	Amabile et al. (1996)
Q5	I try to be as creative as I can in my job	Ganesan and Weitz (1996)
Q6	I would like to learn some new skills that will help me to be more effective at work	Based on Mumford and Gustafson (1988)
Q7	When I perform well, I know it's because of my own desire to achieve	Oliver and Anderson (1994)
Q8	When new trends develop in my workplace, I am usually the first to get on board	Ganesan and Weitz (1996)
Q9	My work is so personally rewarding for me that I am indifferent to special incentives provided by management	Amabile et al. (1996)

[a] Each variable was measured on a Likert scale where ''1'' represented ''strongly disagree'' and ''5'' represented ''strongly agree''.

Source: Gillian Rice (2006) (Table 3, Employee's creative behavior and sources)

Former items were reviewed and edited based on our focus groups and the pilot study, and the literature review of chapter 2. Particularly, questions Q2, Q3, Q4, Q5, Q7, were used, some of them with slightly modifications, in this study for questionnaire's items EC1 to EC6. Each item was measured based on a Likert scale, where ''1'' represented 'strongly disagree', and ''5'' represented 'strongly agree'.

Managers' perception as a validation point.

An special consideration should be taken into account when using this measurement instrument based on self-perception of the employee's creativity. Cultural influences in creativity (as in many other domains) are difficult to grasp, due to the high degree of intangibility of these issues (culture, and creativity). In this sense, Self-perception theory postulates the validity of the first-person as observer of her own behaviors, postulating that to the extent that internal cues are weak, ambiguous, or uninterpretable, the individual is functionally in the same position as an outside observer, an observer who must necessarily rely upon those same external cues to infer the individual's inner states (Bem, 1970). Self-perception theory (considered a behaviorist's theory) was initially formulated, in part, to address empirically certain questions in the philosophy of mind (Chappel, 1962; Ryle, 1949). It appears that Skinner (1945, 1953, 1957) was the first to analyze private events and their role in a science of human behavior.

However social psychologists (Asch, 1952) have long been critical of behavioral analyses of social interactions because they feel that there is something more to interpersonal perception than just responding to the overt behavior of another individual. This 'interpersonal' reflection might be considered specifically relevant when the conceptual framework of this study is based on a cultural psychology and systemic approach. Regarding these concerns, methodological triangulation combines several research methodologies to study the same phenomenon to resolve difficulties in interpretation and theory building (Denzin, 1970). According to Jack (2006) there are

five basic types of triangulation: data triangulation; investigator triangulation that consists of the use of multiple, rather than single observers; multiple triangulation that refers to the situation where the researcher combines in one investigation multiple observers, theoretical perspectives, sources of data, and methodologies; theory triangulation; and methodological triangulation. All these types of triangulations are useful in providing complementary, convergent, divergent and meta inferences, to help a better understanding of the existing reality.

Overseeing above pros and cons about the two observation positions (first-person and third-person), this study will collect additionally the manager's perception of the employee's creativity, as an outside or third-person observer, as a 'validation point' (or investigator triangulation approach) of the self-perceived employee's creativity.

4.5.2. National culture

As explained in chapter 3, at a national level, the cultural make up can be characterized by using Hofstede's cultural dimensions (Hofstede, 1980, 1984, 1991) whose model was developed with the purpose of characterizing the cultural make-up of entire nations.

Dorfman (1988) extended the measurement of culture, through Hofstede's cultural dimensions, usually conceived as attributes at the societal level, to the individual level

as evidenced by the strength of an individual's belief in key cultural values (as explained in detail in section 3.1.2).

Due to the possible diversity of respondent's nuances when interpreting cultural dimensions questionnaire, and after reviewing results from our focus groups and pilot study, researcher adapted (with translation adaptations made when necessary) the list of traits defined by Hofstede (1980) for each one of his cultural dimensions. Previously, of all the traits defined, the researcher made a selection of those who might be identified as related with an organizational setting and/or an employee setting.

In cultural dimensions definition, each dimension is shown through a double list that represents a picture of the difference (depicting the two extremes) between small and large Power Distance, small and large Uncertainty Avoidance, Individualism vs Colletivism, and Femininity vs Masculinity.

Table 4.5.2. Selected Values of Hofstede's – Power Distance Dimensions

Question	Small Power Distance	High Power Distance	Source(s)
PWD1	Inequality in society should be minimized.	There should be an order of inequality in this world in which everybody has a rightful place; high and low are protected by this order.	Hofstede (1980)
PWD2	Superiors consider subordinates to be "people like me".	Superiors consider subordinates to be a different kind of people.	Hofstede (1980)
PWD3	Subordinates consider superiors to be "people like me".	Subordinates consider superiors as a different kind of people.	Hofstede (1980)
PWD4	Superiors are accessible.	Superiors are inaccessible.	Hofstede (1980)
PWD5	Those in power should try to look less powerful than they are.	Those in power should try to look as powerful as possible.	Hofstede (1980)
PWD6	Cooperation among the powerless can be based on solidarity.	Cooperation among the powerless is difficult to attain because of their low-faith-in-people norm.	Hofstede (1980)

Source: Hofstede (1980)

Table 4.5.3. Selected Values of Hofstede's – Uncertainty Avoidance Dimensions

Question	Small Power Distance	High Power Distance	Source(s)
UNA1	The uncertainty inherent in life is more easily accepted and each day is taken as it comes.	The uncertainty inherent in life is felt as a continuous threat that must be fought.	Hofstede (1980)
UNA2	More acceptance of dissent is entailed.	A strong need for consensus is involved.	Hofstede (1980)
UNA3	There is more willingness to take risks in life.	There is great concern with security in life.	Hofstede (1980)
UNA4	There should be as few rules as possible.	Here is a need for written rules and regulations.	Hofstede (1980)
UNA5	Belief is placed in generalists and common sense.	Belief is placed in experts and their knowledge.	Hofstede (1980)

Source: Hofstede (1980)

Table 4.5.4. Selected Values of Hofstede's – Collectivist vs Individualist Dimensions

Question	Small Power Distance	High Power Distance	Source(s)
IND1	In society, people are born into extended families or clans who protect them in exchange for loyalty.	In society, everybody is supposed to take care of himself/herself and his/her immediate family.	Hofstede (1980)
IND2	"We" consciousness holds sway.	"I" consciousness holds sway.	Hofstede (1980)
IND3	Identity is based in the social system.	Identity is based in the individual.	Hofstede (1980)
IND4	There is emotional dependence of individual on organizations and institutions.	There is emotional independence of individual from organizations or institutions.	Hofstede (1980)
IND5	The involvement with organizations is moral.	The involvement with organizations is calculative.	Hofstede (1980)
IND6	Belief is placed in group decisions.	Belief is placed in individual decisions.	Hofstede (1980)

Source: Hofstede (1980)

Table 4.5.5. Selected Values of Hofstede's – Feminine vs Masculine Dimensions

Question	Small Power Distance	High Power Distance	Source(s)
MAS1	People and environment are important.	Money and things are important.	Hofstede (1980)
MAS2	Interdependence is the ideal.	Independence is the ideal.	Hofstede (1980)
MAS3	Service provides the motivation	Ambition provides de drive	Hofstede (1980)
MAS4	One sympathizes with the unfortunate.	One admires the successful achiever.	Hofstede (1980)
MAS5	Small and slow are beautiful.	Big and fast are beautiful.	Hofstede (1980)
MAS6	Unisex and androgyny are ideal.	Ostentatious manliness ("machismo") is appreciated.	Hofstede (1980)

Source: Hofstede (1980)

From Hofstede's (1980) dimension of Power Distance, 6 items were selected and set in a double list representing the two extremes (questionnaire's items PWD1 to PWD6); 5 items from the Uncertainty Avoidance dimension (questionnaire's items UNA1 to UNA5); 6 items from the Collectivism – Individualism dimension (questionnaire's items IND1 to IND6); and 6 items from the Femininity – Masculinity (questionnaire's items MAS1 to MAS6). Based on conclusions from our focus groups, some of the questions were adapted or reworded. Variables were measured with a 5 level scale, where "1" represents that the respondent feels herself 'strongly identified' with values expressed in the left list, and "5" represents to be 'strongly identified' with values expressed in the right list.

4.5.3. Organizational context

The four groups of variables representing the different dimensions of the Organizational Context were measured with the questionnaire developed by Rice (2006) in his study about employee creativity, and listed on following table:

Table 4.5.6. Organizational Context — variables and sources

Number	Organizational Context variables [a]	Literature Source(s)
1. Structure, control, and hierarchy		
Q1	It is very important to follow rules and procedures in my organization	Fyvie and Ager (1999)
Q2	My supervisor always provides me with clear instructions when assigning me a new project	Bakhtari (1995)
Q3	At my place of work, power is in the hands of relatively few people	Fyvie and Ager (1999)
Q4	My work environment is structured with all activities and projects carefully planned	Amabile et al. (1996)
Q5	Procedures and structures are too formal in my organization	
2. Support, interaction, communication and consultation		
Q6	My supervisor always encourages me to learn new things	
Q7	My supervisor frequently consults me to ask for my opinion before making decisions	
Q8	In my workgroup, people usually only share information with other team members if they see that doing so will lead to some personal benefit.	Von Krogh et al. (2000)
Q9	* In my organization, people do not usually share information with people in other workgroups unless they see an advantage for their own work group	Von Krogh et al. (2000)
Q10	At work, I feel that I have a responsibility to share my expertise with others	Von Krogh et al. (2000)
Q11	* In my organization, managers believe that time spent to reach collective decisions is valuable time	Al Sayed (2003)
Q12	Success in my organization requires initiative and providing ideas, more than commitment to rules and procedures	Al Sayed (2003)

Number	Organizational Context variables [a]	Literature Source(s)
3. Risk-taking orientation		
Q13	Top management does not want to take risks in my organization	Amabile et al. (1996)
Q14	There is much emphasis in my organization on doing things the way we have always done them.	Amabile et al. (1996)
Q15	People are encouraged to take risks in my organization	Amabile et al. (1996)
4. Atmosphere		
Q16	I enjoy doing my work so much that I forget other things	Amabile et al. (1996)
Q17	I feel a sense of time pressure in my work	Amabile et al. (1996)
Q18	There is truly an atmosphere of fun and playfulness at my workplace	Watson et al. (1988)
Q19	There is free and open communication in my organization	Amabile et al. (1996)
Q20	* People are quite concerned about negative criticism of their work in my organization	Amabile et al. (1996)
Q21	* In my organization, there is an atmosphere of caring about building up employees' skills and expertise.	Von Krogh et al. (2000)
Q22	* The members of my workgroup feel a strong sense of commitment to working for our organization	Amabile et al. (1996)

Source: Gillian Rice (2006)

Based on conclusions from our focus groups, most of the questions were reversed to an affirmative/positivistic form, to minimize misunderstandings of respondents due to

certain confusions provoked by prior mix between positive/negative questioning items, as expressed in the original Rice (2006) questionnaire. Items were measured based on a Likert scale, where "1" represented 'strongly disagree', and "5" represented 'strongly agree'.

Concretely, questions used in this study where Q1, Q2, Q3, Q4 and Q5, to measure group variable Organizational Control and Structure (questionnaire's items SCH1 to SCH6). Questions Q6, Q7, and Q11 were used without modification, whilst Q8, Q9, Q10, and Q12 were deeply modified, to measure variable Supportive Communication (questionnaire's items SICC1 to SICC7). Questions Q13 and Q14 got a translation version and Q15 was used to measure variable of Risk-taking orientation (questionnaire's items RTO1 to RTO4). Finally, the variable Atmosphere was measured with questions Q16, a translation version of questions Q17, Q18, Q19, Q20, and Q21, being discarded Q22 (questionnaire's items ATM1 to ATM6).

4.5.4. Individual values

As mentioned in chapter 3, individual values are also included in our model. One framework useful in examining individual values is Schwartz's (1994) value inventory. This model is useful both in understanding values and in understanding culture. Schwartz Value Survey (SVS) represents a values instrument, based on theory and suitable for cross-cultural research. Based on that, our self-completion questionnaire

includes an evolutionary proposal of the SVS, defined as Portrait Values Questionnaire PVQ (Schwartz, 2001) to measure human values.

The PVQ was designed to measure the same ten basic value orientations measured by the Schwartz Value Survey. However, it exhibits respondents with a more concrete and less cognitively complex task than the earlier value survey. This makes it suitable for use with all segments of the population including those with little or no formal schooling.

A selection of five Schwartz's value types out of ten was selected by Rice (2006) based on the literature, as the ones that are related to creativity. These types are Self-direction, Stimulation, Achievement, Conformity, and Power. Based on Schwartz's (1994) definitions of motivational types of values in terms of their goals and the single values that represent them, following we reproduce the definitions for the five types of values selected:

Table 4.5.7. Definitions of selected Motivational Types of Values – Terms of their Goals and (within brackets) Single Values that Represent Them

Name	Description
SELF-DIRECTION	Independent thought and action-choosing, creating, exploring. (creativity, freedom, independent, curious, choosing own goals)
STIMULATION	Excitement, novelty, and challenge in life. (daring, a varied life, an exciting life)
ACHIEVEMENT	Personal success through demonstrating competence according to social standards. (successful, capable, ambitious, influential)
POWER	Social status and prestige, control or dominance over people and resources. (social power, authority, wealth, preserving my public image)
CONFORMITY	Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms. (politeness, obedient, self-discipline, honoring parents and elders)

Source: Adapted from Schwartz, 2001. Definitions of Motivational Types of Values in Terms of their Goals and the Single Values that Represent Them

As Schwartz (2001) states, the PVQ includes short verbal portraits of different people. Each portrait describes a person's goals, aspirations, or wishes that point implicitly to the importance of a single value type. For each portrait, respondents answer: "How much like you is this person?". By describing each person in terms of what is important to him or her—the goals and wishes he or she pursues—the verbal portraits capture the person's values without explicitly identifying values as the topic of investigation. In our study, after reviewing results of our focus groups and pilot study, we decided to change the portrait based from a third person, to a self perception about 'myself' (the respondent) as we observed questions were better understood and so they were answered in a more confident manner. In fact, our questionnaire was designed based on following recommended value items for each basic value type selected:

Table 4.5.8. PVQ items

Question	Name	Items		Source(s)
Q1	SELF-DIRECTION	1.	Thinking up new ideas and being creative is important to him. He likes to do things in his own original way.	Schwartz (2001)
		11.	It is important to him to make his own decisions about what he does. He likes to be free to plan and to choose his activities for himself	
Q2	STIMULATION	6.	He likes surprises and is always looking for new things to do. He thinks it is important to do lots of different things in life.	Schwartz (2001)
		15.	He looks for adventures and likes to take risks. He wants to have an exciting life.	
Q3	ACHIEVEMENT	4.	It is very important to him to show his abilities. He wants people to admire what he does.	Schwartz (2001)
		13.	Being very successful is important to him. He likes to impress other people.	
Q4	POWER	2.	It is important to him to be rich. He wants to have a lot of money and expensive things.	Schwartz (2001)
		17.	It is important to him to be in charge and tell others what to do. He wants people to do what he says.	
Q5	CONFORMITY	7.	He believes that people should do what they're told. He thinks people should follow rules at all times, even when no-one is watching.	Schwartz (2001)
		16.	It is important to him always to behave properly. He wants to avoid doing anything people would say is wrong.	

Source: excerpt from Schwartz (2001) (Table 6. List of 21 PVQ Items for ESS)

A later adaptation of these items was reviewed and edited based on our focus groups and the pilot study, adding up in some cases, one or two more items, just when necessary, to value types: self-direction (questionnaire's items SD1 to SDI4), stimulation (questionnaire's items STI1 to STI3), achievement (questionnaire's items ACH1 to ACH4), power (questionnaire's items PWR1 to PWR4), and conformity

(questionnaire's items CON1 to CON3). Finally, each item was measured based on a Likert scale, where "1" represented 'strongly disagree', and "5" represented 'strongly agree'.

4.5.5. Control variables

As control variables, the survey asked in the questionnaire about age, gender, nationality, years of labor experience, years in the company, education degree, and in case of college degree, which career. All the participant employees were selected by their managers randomly.

Of the 198 employees sample, all of them were Spanish except 2 Chinese persons. Minimum 1 year of labor experience in the company. Gender distribution was 33,4% (66) women and 66,6% (132) men. From all the sample 62,1% (123) had a university or PhD degree. From the rest, 14,6% (29) had a high school degree, and a 23,2% had a basic degree. Their years of labor experienced spanned from 1 to 43 years. Their years in the company spanned from 1 to 41 years. And their age spanned from 21 to 64 years old.

Of the 12 managers sample, all of them were Spanish, with an age spanning from 37 to 54 years old. 100% of the sample had a university degree. Their labor experience

spanned from 12 to 33 years, and their experience in the company ranged from 2 to 20 years.

4.6 Chapter summary

In this chapter we explain the methodological approach employed for the empirical application of this dissertation, including a description the research design, the sample, the empirical procedures and variables selection and measurement.

This study aims to determine the relationships between the cultural context and the employees' creativity. In this sense, it can be qualified as a 'cross-cultural' research, and the quantitative approach is the one selected. This research is based on primary data, with a cross-sectional quantitative approach.

A total of 198 employees from 10 Spanish organizatons from different sectors represented the sample of the population under study. This sample is by no means representative of the entire population, and in consequence, this study will specifically provide empirical evidence from 10 Spanish organizations, on the purpose of this research. The organizations were selected to represent public and mainly private sector firms as one factor of diversity; industrial, technological and service firms as a second factor; small, medium and big enterprise as a third factor of diversity, but where the questionnaire was in all cases, distributed at an specific area or unit level within the

company, in order to have direct access to the supervisor on charge of this unit. Within each of the 10 companies surveyed, it was targeted a small unit resulting an average of 20 participants per unit. Participants were selected by management teams according to their needs.

The questionnaires were conducted during the first semester of 2015. Questionnaires were self-distributed to employees and managers. A total of 396 self-completion questionnaires were validated. Half of the questionnaires, 198, were distributed to employees of the 10 organizations. Next, 198 questionnaires were distributed among 12 managers (as a point of validation) in order to score the EC of each one of their employees.

The questionnaire was translated from the original English language of the measurement instruments to Spanish, and it was reviewed through 3 focus groups, each one dedicated to one of the 3 measurement instruments. Next, the pilot study was developed with 2 organizations, examining variable's correlations and Cronbach's Alpha factors, among others.

EC measures were gathered from employees' self-perception answers to the questionnaire, and from their managers' perceptions, where they express their opinion as managers about the same questions related to EC of each employee.

National cultural dimensions were measured through an adaptation (including translation adaptations when necessary) of the list of traits defined by Hofstede (1980) for each one of his cultural dimensions.

The four variables representing the different dimensions of the Organizational Context were measured with an adaptation of the questionnaire developed by Rice (2006).

Finally, an evolutionary proposal of the SVS (Schwartz, 1994), defined as Portrait Values Questionnaire PVQ (Schwartz, 2001), was used to measure human values.

Chapter 5 – Empirical findings

5.1. Introduction

As mentioned in chapter 4 (Empirical Method), given that the aim of this research is to analyze "why" individual, organizational and cultural characteristics could explain the employee creativity, the suitable methodology that should be used is empirical research. Following this line of argument, the current chapter purposes two objectives: Firstly, it is going to analyze the validity and reliability of the scales used to measure our research variables. Secondly, it is going to test the hypotheses formulated during the chapter 3 of this dissertation.

To undertake these two objectives, once we had received all of the questionnaires that we described in chapter 4, we proceeded to codify the information obtained. This information was incorporated in a data base created with the program SPSS. Thus, in the current chapter, using statistical techniques derived from regressions, we are going to test our hypotheses.

Multivariate analysis involves a set of statistical techniques whose main goal is to analyze simultaneously information related to various variables for each element under study. Among them, the dependency models assume that analyzed variables are divided into two groups: dependent variables and independent variables. Ordaz et al. (2011)

point out in table 5.1.1 a classification of (non exhaustive) statistical methods based on the nature of variables:

Table 5.1.1. Dependency Models

Dependent Variable(s)	Independent Variable(s)	
	Quantitative	Qualitative
Quantitative	- Regression - Exploratory factor analysis - Structural equations	- Regression dummy - t-test - ANOVA - MANOVA
Qualitative	- Discriminating analysis - Probit - Logit	- Discriminating analysis - Conjoint analysis

Source: Self-devised, based on Ordaz et al. (2011)

Regression analysis is the study of the dependence or explanation of the behavior of a variable with respect to one or more independent or explanatory variables, in order to assess and/or predict the expected value or average value of the population in terms of the first known or fixed values (in repeated samples) of the past.

The distinction between linear simple or multiple regression model has to do with the number of explanatory variables that presents a model. In this way, when the behavior of a variable is explained only by another variable, it is named simple regression. But when such behavior is explained based on more variables it is considered multiple regression.

To be precise, in fact, we used the multiple linear regression technique because the dependent variable shows a normal distribution, and this study doesn't look for causality as this research is cross-sectional and not longitudinal. Our hypotheses were tested using hierarchical regression analysis because an interaction effect only exists if the interaction term gives a significant contribution over and above the direct effects of the independent variables (Cohen and Cohen, 1983), and so, to distinguish between the effect of control variables from the effect of the independent model's variables. And we tested the measurement properties using exploratory factor analysis (EFA, from now on).

Thus, the structure adopted in the chapter, consistent with the objectives sought, is as follows. Firstly, we are going to explain the statistical techniques used to obtain construct validity and reliability. Secondly, we are going to analyze the unidimensionality, validity and reliability of all of the measurement scales using EFA. Thirdly, we are going to test our hypothesis using hierarchical regressions. Finally, we will summarize the key findings obtained in this chapter.

5.2. Validity and reliability of the measurement scales

All measures used in sciences, physical or social, are subject to error. The main difference between physical and social science is the extent of the measurement error, but not its existence. The quantification of random measurement error is named reliability analysis (Dillman, 1978). A measure is reliable to the extent that independent but comparable measures of the same trait or construct of a given object agree. Reliability depends on how much of the variation in scores is attributable to random or chance errors (Churchill, 1979). Then, if a measure is perfectly reliable, the random error will be zero. To ensure reliability we will use Cronbach Alpha.

The second condition that all measures should fulfill is that they have to be valid. A measure is valid when the differences in observed scores reflect true differences in the characteristic that one is attempting to measure and nothing else (Churchill, 1979). Then, if a measure is valid then it is reliable, but the converse is not necessary true. Thus, it is often said that reliability is a necessary but not a sufficient condition for validity.

There are different types of construct validity. The most important types are content, convergent and discriminating validity. Content validity is the assessment of the correspondence of the variables to be included in a summated scale, and its conceptual definition (Hair, 1999). This form of validity, also known as face validity, subjectively assesses the correspondence between individual items and the concept through ratings

by expert judges, pre-test with multiple subpopulations, or by other means. The objective is to ensure that the selection of scale items extends past just empirical issues to also include theoretical and practical considerations. In this research, the content validity is supported by the wide revision of the literature that has been conducted, both to develop the outline of the hypotheses and to develop the measure scales; and by the pre-tests made by interviews of 101 workers (See chapter 4).

Convergent validity assesses the degree to which two measures of the same concept are correlated. High correlations here indicate that the scale is measuring its intended concept (Hair, 1999). Evidence of the convergent validity of the measure is provided by the extent to which it correlates highly with other methods designed to measure the same construct (Churchill, 1979). In our case, we ensure convergent validity with the high correlation between the different items that measure the same construct.

Lastly, discriminating validity is the degree to which two conceptually similar concepts are distinct (Hair, 1999). Discriminating validity will be indicated in this thesis by low correlations between the measure of interest and other measures that are supposedly not measuring the same variable or concept. That is, correlations between different constructs should be low to demonstrate that the summated scale is sufficiently different from other concepts.

The fundamental objective in measurement is to obtain the maximum validity and reliability (Dillman, 1978). The problem is that the researcher cannot be completely sure about the measures because there are always interferences. The quality of the

interferences depends directly on the procedure that is used to develop measures and the evidence supporting their goodness. This evidence typically takes the form of some kind of reliability or validity index, of which there are great many. There is a procedure for developing better measures. From that long procedure, in this section we are going to focus on the attainment of reliability and validity.

5.3. Validity and reliability of the constructs

Gerbing and Anderson (1988) proposed a two-step model-building approach that emphasized the analysis of two conceptually distinct models: measurement and structural models. The stages followed to obtain the simultaneous analysis of all of our variables are the following.

We started by doing preliminary data analysis to analyze possible missing data and normality (See Appendix 3). We do not have missing data because the first action that took place before starting the data analysis was to remove from the database those questionnaires that were incomplete. Therefore, as explained in chapter 4, we had 198 valid questionnaires.

To analyze normality, we calculated the skewness and kurtosis values for each variable. Following Hair (1999) values exceeding ±2.58 indicate that we can reject the assumption about the normality of the distribution at the 0.01 probability level. As we

can see in Appendix 3, most of the variables are normal or very close to normal. That is, all of the variables reach the skewness standard and in only two cases, the kurtosis value is a bit higher than 2.58. Therefore, we can confirm that our model explains close to multivariate normality. However, given that the data of our model do not fulfill 100% normal distribution requirements, we should focus on the robust coefficients. When we saw there were no problems with our data base, we started our EFA.

To determine the appropriateness of EFA, we conducted the Barlett test of sphericity and the KMO (Kaiser-Meyer-Olkin) measurement of the sampling adequacy. The Barlett test of sphericity is a statistical test for the presence of correlations among the variables. It provides the statistical probability that the correlation matrix has significant correlations among at least some of the variables. All our measures showed significant Barlet test of sphericity ($p<0.05$). The KMO is an index that ranges from 0 to 1, reaching 1 when each variable is perfectly predicted without error of the other variables. The KMO index scale can be interpreted using the following guidelines: 0.8 or above, meritorious; 0.7 or above, middling; 0.6 or above, mediocre; 0.5 or above miserable; and below 0.5 unacceptable (Hair, 1999). For all our measures we got KMO of 0.75 or above. Thus, we can consider that they are close to meritorious. After conducting these two tests we concluded that the EFA was adequate and we conducted our analysis.

The EFA was useful for making the analysis of the unidimensionality of constructs (Hair, 1999) and a purification of the measures. With this analysis we were able to verify the external and internal consistence of our data. External consistency was

ensured with the construction of a correlation matrix showing all correlations among the items in the domain. To analyze internal consistency, following Churchill (1979), we assumed that the recommended measure of internal consistency of a set of items is provided by the coefficient alpha. In our case, we used Cronbach alpha in our EFA.

Following the literature advices, we conducted EFA by the maximum likelihood method using the varimax rotated solution. We used the varimax rotated solution because it is the most suitable when the constructs are multidimensional (Hair, 1999). The EFA helped us to determine the number of dimensions underlying the constructs.

Discriminating validity will be indicated in this thesis by low correlations between the measure of interest and other measures that are presumed not measuring the same variable or concept. Concerning correlations, we note that there is a high correlation (over 0.8) between Risk orientation and Atmosphere and between Risk orientation and Conformity. To ensure that multicollinearity was not an issue, Value Inflation Factors (VIFs) were computed (but are not reported here because of space limitations). We found the VIF between Risk orientation and Atmosphere, higher than recommended and for that reason we decided to make a single variable using the items from previous Risk orientation and Atmosphere. We conducted VIF analysis again. No VIFs were greater than 5, indicating that we did not encounter multicollinearity (see Appendix 4).

As explained before, reliability will be evaluated with the Cronbach Alpha in the EFA. The literature suggest values over 0.7 as a guarantee for reliability (all of our measures have Cronbach Alphas over 0.7).

As a summary of the steps mentioned to guarantee reliability and internal and external validity, that is, the goodness of fitness (GOF from now on) Criteria, we introduce table 5.5.

Table 5.3.1 EFA as method to obtain the GOF

Exploratory factor analysis (EFA)	
GOF Criteria	**Acceptable level**
Barlett test of sphericity	p≤0.05
KOM	≥0.7
Value of the standardized loading (λi)	≥0.5
Total Average variance explained	≥0.4
Cronbach Alpha	≥0.7

5.3.1. Validity and reliability of the dependent variables

5.3.1.1. Employee creativity (EC)

As explained in chapters 3 and 4, we have used two respondents to measure EC. As it is shown in tables 5.3.1.1 and 5.3.1.2, we achieve all the GOF criteria for the EFA.

Table 5.3.1.1. EFA EC based on the employee's perception

Items	λi	GOF Criteria
EC1	0.686	Barlett test of sphericity: 0.000
EC2	0.837	KOM: 0.879
EC3	0.661	Total Average variance explained: 57.138
EC4	0.626	Cronbach Alpha: 0.919
EC5	0.684	Note: λi = Value of the standardized loading
EC6	0.797	
EC7	0.960	
EC8	0.719	
EC9	0.774	

Table 5.3.1.1. shows that GOF criteria has been reached.

Table 5.3.1.2. EFA EC based on the Manager's perception

Items	λi	GOF Criteria
EC1 Manager	0.747	Barlett test of sphericity: 0.000
EC2 Manager	0.859	KOM: 0.869
EC3 Manager	0.648	Total Average variance explained: 64.377
EC4 Manager	0.757	Cronbach Alpha: 0.938
EC5 Manager	0.674	Note: λi = Value of the standardized loading
EC6 Manager	0.840	
EC7 Manager	0.958	
EC8 Manager	0.764	
EC9 Manager	0.919	

Table 5.3.1.2 shows that GOF criteria has been reached.

5.3.2. Validity and reliability of the independent variables

5.3.2.1. Power distance

Power Distance, as defined by Hofstede (2001), refers to the extent to which the less powerful members of society accept and expect power to be unequally distributed. Variable items were measured with a 5 level scale, where "1" represents that the respondent feels herself 'strongly identified' with values expressed in the left list, and "5" represents to be 'strongly identified' with values expressed in the right list.

Table 5.3.2.1. EFA Power Distance based on the employee's perception

Items	λi	GOF Criteria
PWD1	0.745	Barlett test of sphericity: 0.000
PWD2	0.687	KOM: 0.921
PWD3	0.703	Total Average variance explained: 48.774
PWD4	0.748	Cronbach Alpha: 0.904
PWD5	0.801	Note: λi = Value of the standardized loading
PWD6	0.661	
PWD7	0.605	
PWD8	0.748	
PWD9	0.593	
PWD10	0.663	

Table 5.3.2.1. shows that GOF criteria has been reached.

5.3.2.2. Collectivism – Individualism

The cultural dimension Collectivism - Individualism describes the relationship between the individual and collectivity that prevails in a given society. This dimension reflects if people's self-image is defined in terms of "I" or "We." and it has many implications for values and behaviors (Hofstede, 2001). Variable items were measured with a 5 level scale, where "1" represents that the respondent feels herself 'strongly identified' with values expressed in the left list, and "5" represents to be 'strongly identified' with values expressed in the right list.

Table 5.3.2.2. EFA Individualism based on the employee's perception

Items	λi	GOF Criteria
IND1	0.619	Barlett test of sphericity: 0.000
IND2	0.724	KOM: 0.838
IND3	0.718	Total Average variance explained: 43.594
IND4	0.572	Cronbach Alpha: 0.839
IND5	0.542	
IND6	0.616	
IND8	0.793	

Table 5.3.2.2. shows that GOF criteria has been reached. To obtain such GOF we had to eliminate items IND 7, IND9 and IND10.

5.3.2.3. Uncertainty avoidance

Uncertainty avoidance reflects the degree to which the members of society feel uncomfortable with uncertainty and ambiguity (Hofstede, 2001). Variable items were measured with a 5 level scale, where "1" represents that the respondent feels herself 'strongly identified' with values expressed in the left list, and "5" represents to be 'strongly identified' with values expressed in the right list.

Table 5.3.2.3. EFA Uncertainty Avoidance based on the employee's perception

Items	λi	GOF Criteria
UNA2	0.651	Barlett test of sphericity: 0.000
UNA3	0.798	KOM: 0.701
UNA5	0.631	Total Average variance explained: 49.214
UNA9	0.714	Cronbach Alpha: 0.702

Table 5.3.2.3. shows that GOF criteria has been reached. To obtain such GOF we had to eliminate items UNA1, UNA 4, UNA 5 and UNA 9.

5.3.2.4. Femininity – Masculinity

Masculinity is defined as the extent to society supports or not, the role of traditional male labor male achievements, according to Hofstede (1994), where a high level indicates a high degree of separation gender, while a low level indicates that society has a low level of segregation and gender discrimination. Variable items were measured with a 5 level scale, where "1" represents that the respondent feels herself 'strongly identified' with values expressed in the left list, and "5" represents to be 'strongly identified' with values expressed in the right list.

Table 5.3.2.4. EFA Masculinity based on the employee's perception

Items	λi	GOF Criteria
MAS1	0.677	Barlett test of sphericity: 0.000
MAS2	0.731	KOM: 0.835
MAS3	0.724	Total Average variance explained: 45.063
MAS4	0.714	Cronbach Alpha: 0.827
MAS5	0.588	
MAS6	0.576	

Table 5.3.2.4. shows that GOF criteria has been reached.

5.3.2.5. Organizational control and structure

Structure, hierarchy and control represent a group of variables from an organizational context that is considered to influence creativity in organizations. Items were measured

based on a Likert scale, where "1" represented 'strongly disagree', and "5" represented 'strongly agree'.

Table 5.3.2.5. EFA Organizational Control and Structure based on the employee's perception

Items	λi	GOF Criteria
SCH1	0.553	Barlett test of sphericity: 0.000
SCH3	0.719	KOM: 0.721
SCH4	0.566	Total Average variance explained: 38.750
SCH5	0.638	Cronbach Alpha: 0.709

Table 5.3.2.5. shows that GOF criteria has been reached. To obtain such GOF we had to eliminate items SCH2 and SCH6.

5.3.2.6. Supportive communication

Supportive communication from supervisors and/or co-workers also represents a second group of variables that influence creativity in organizations. Items were measured based on a Likert scale, where "1" represented 'strongly disagree', and "5" represented 'strongly agree'.

Table 5.3.2.6. EFA Supportive Communication based on the employee's perception

Items	λi	GOF Criteria
SICC1	0.767	Barlett test of sphericity: 0.000
SICC2	0.587	KOM: 0.888
SICC3	0.774	Total Average variance explained: 55.302
SICC4	0.657	Cronbach Alpha: 0.894
SICC5	0.762	
SICC6	0.787	
SICC7	0.841	

Table 5.3.2.6. shows that GOF criteria has been reached.

5.3.2.7. Risk taking orientation and Atmosphere

As we have already explained. Due the high correlation between risk-taking orientation and atmosphere, we decided to add both variables and have a new variable called Risk taking and Atmosphere. Risk taking orientation, for the purpose of this study, is conceived as one environment characteristic of an organizational context that encourages attitudes of the type of doing things in a different way. Furthermore, organizational contexts that involve a trust and a caring atmosphere in the workplace can also enhance employees' creativity, and so, it would ease risk taking attitudes. Items were measured based on a Likert scale, where "1" represented 'strongly disagree', and "5" represented 'strongly agree'.

Table 5.3.2.7. EFA Risk Taking Orientation and Atmosphere based on the employee's perception

Items	λi	GOF Criteria
RTO1	0.819	Barlett test of sphericity: 0.000
RTO1	0.764	KOM: 0.936
RTO3	0.818	Total Average variance explained: 54.942
RTO4	0.781	Cronbach Alpha: 0.922
ATM1	0.724	
ATM2	0.585	
ATM3	0.743	
ATM4	0.733	
ATM5	0.704	
ATM6	0.713	

Table 5.3.2.7. shows that GOF criteria has been reached.

5.3.2.8. Self direction

Self-direction value type represents a defining goal of independent thought and action to choosing, creating, and exploring. Its values selection would include Creativity, Freedom, Choosing own goals, Curious, Independent (Schwartz,1994). Items were measured based on a Likert scale, where "1" represented 'strongly disagree', and "5" represented 'strongly agree'.

Table 5.3.2.8. EFA Self Direction based on the employee's perception

Items	λi	GOF Criteria
SDI1	0.672	Barlett test of sphericity: 0.000
SDI2	0.843	KOM: 0.781
SDI3	0.724	Total Average variance explained: 60.318
SDI4	0.852	Cronbach Alpha: 0,854

Table 5.3.2.8. shows that GOF criteria has been reached.

5.3.2.9. Stimulation

Stimulation value type represents a defining goal of excitement, novelty, challenge in life. Its values selection would include A varied life, An exciting life, and Daring (Schwartz,1994). Items were measured based on a Likert scale, where "1" represented 'strongly disagree', and "5" represented 'strongly agree'.

Table 5.3.2.9. EFA Stimulation based on the employee's perception

Items	λi	GOF Criteria
STI1	0.854	Barlett test of sphericity: 0.000
STI2	0.654	KOM: 0.690
STI3	0.752	Total Average variance explained: 57.412
		Cronbach Alpha: 0.795

Table 5.3.2.9. shows that GOF criteria has been reached.

5.3.2.10 Achievement and conformity

Achievement value type represents a defining goal of personal success through demonstrating competence according to social standards. Its values selection would include Ambitious, Successful, Capable, and influential (Schwartz,1994). Conformity value type represents a defining goal of restraint of actions, inclinations and impulses likely to upset or harm others and violate social expectations or norms. Its values selection would include Obedient, Self-discipline, Politeness, Honoring parents and

elders. Items were measured based on a Likert scale, where "1" represented 'strongly disagree', and "5" represented 'strongly agree'.

Table 5.3.2.10. EFA Achievement and Conformity based on the employee's perception

Items	λi	GOF Criteria
ACH1	0.747	Barlett test of sphericity: 0.000
ACH2	0.620	KOM: 0.764
ACH3	0.737	Total Average variance explained: 60.201
ACH4	0.644	Cronbach Alpha ACH: 0,804
CON1	-0.219	Cronbach Alpha CON: 0,858
CON3	-0.187	

Table 5.3.2.10. shows that GOF criteria has been reached. Following the literature, given that we had to eliminate CON2 because of its low factor loading, we have conducted the EFA for achievement and conformity together and calculated Cronbach alphas independently

5.3.2.11 Power

Power value type represents a defining goal of social status and prestige, control or dominance over people and resources. Its values selection would include Authority, Wealth, Social power (Schwartz,1994). Items were measured based on a Likert scale, where "1" represented 'strongly disagree', and "5" represented 'strongly agree'.

Table 5.3.2.11. EFA Power based on the employee's perception

Items	λi	GOF Criteria
PWR1	0.636	Barlett test of sphericity: 0.000
PWR2	0.673	KOM: 0.558
PWR3	0.630	Total Average variance explained: 41.818
		Cronbach Alpha: 0.302

Table 5.3.2.11. shows that GOF criteria has been reached.

The power scale does not reach GOF criteria. For that reason, we have decided to use its first item "to me it is important to have power over others" which better covers the meaning of the construct.

5.3.3. Control variables

Similar to other studies, this one has controlled for the Manager's and employee's age and sex and for the employee's education. For any additional references to control variables and the different values go to chapter 4, section 4.5.4.

5.4. Result's Analysis

Once a valid model has been established, hypotheses can be tested. In this section, we are going to test the hypotheses proposed in the theoretical chapters. As we have already explained, we conducted two hierarchical regressions, where the model is considered correct because the residuals are consistent with random error as residuals are normally distributed in the residual plot. The first hierarchical regression, as the main focus for

the purpose of this study, will analyze the relationship between the self-perceived employee's creativity with the independent variables, while the second one, as a validation point, will relate the manager's perception on their employees' creativity.

The results are displayed in Tables 5.4.1 and 5.4.2.

Table 5.4.1 Regression analysis for the perception of the employee on the EC

Dependent variable:	Base Model		Independent Model	
	Coefficient	t statistic	Coefficient	t statistic
Control variables				
Manager age	0.006	0.608	-0.018	-2.203
Manager gender	-0.028	-0.170	0.087	0.734
Employee age	-0.011 *	-2.429	-0.005	-1.187
Employee gender	0.360 **	3.455	0.087	1.052
Employee Education	0.003	0.063	-0.009	-0.294
Independent variables				
Power Distance			0.170 **	2.841
Uncertainty Avoidance			0.336 ***	4.447
Collectivism			0.058	0.735
Masculinity			-0.272 ***	-4.231
Supportive Communication			0.213 ***	4.036
Control and Structure			-0.113	-1.449
Self-Direction			0.108	1.387
Stimulation			-0.010	-0.119
Achievement			0.125	1.639
Power			0.028	0.498
Conformity			-0.114 †	-1.936
Risk Orientation / Atmosphere			0.118	1.297
Model				
R^2		0.076	0.597	
Adjusted R^2		0.052	0.559	
F statistic		3.14**	15.678 ***	
Change in R^2			0.521	
Change in F			19.397 ***	

† $p < 0.1$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

The base model displayed in the first column explains a statistically significant share of the variance. Here we can see that the employee's sex and age have significant relation on the employee' perception of their creativity. Model 1, in the next column, makes a

significant contribution over and above the base models ($\land R^2 = 0.521$, p < 0.000). In relation with the main variables, we see that employees' values about power distance, uncertainty avoidance, masculinity, supportive communication, and conformity show a relationship with the the employee's own self-perceived creativity. We will analyse the implications of these significant relationships after the analysis of the managers' perception of their employees' creativity.

Table 5.4.2 Regression analysis for the perception of the Manager on the EC

Dependent variable:	Base Model		Independent Model	
	Coefficient	t statistic	Coefficient	t statistic
Control variables				
Manager age	0.017	1.392	-0.011	-1.249
Manager gender	0.040	0.205	0.077	0.590
Employee age	-0.006	-1.031	0.013 **	2.818
Employee gender	0.452 ***	3.691	0.065	0.722
Employee Education	0.125 *	2.537	0.115 **	3.456
Independent variables				
Power Distance			0.099	1.502
Uncertainty Avoidance			0.269 **	3.248
Collectivism			-0.059	-0.685
Masculinity			-0.140 *	-1.988
Supportive Communication			0.163 **	2.820
Control and Structure			-0.193 *	-2.249
Self-Direction			0.407 ***	4.772
Stimulation			-0.199 *	-2.109
Achievement			0.146 †	1.751
Power			-0.109 †	-1.768
Conformity			-0.171 **	-2.637
Risk Orientation / Atmosphere			0.246 *	2.477
Model				
R^2		0.094	0.656	
Adjusted R^2		0.071	0.623	
F statistic		3.992**	20.167 ***	
Change in R^2			0.562	
Change in F			24.467 ***	

† p < 0.1; * p < 0.05; ** p < 0.01; *** p < 0.001

The base model displayed in the first column explains a statistically significant share of the variance. Here we can see that the employee's sex and education have significant

relation on the Manager's perception of their creativity. Model 1, in the next column, makes a significant contribution over and above the base models ($\wedge R^2 = 0.562$, p < 0.000). Here, we can see that the age and education of the employee affects the Manager's perception of his creativity. In relation with the main variables, we see that employees' values about uncertainty avoidance, masculinity, supportive communication, control and structure, self-direction, stimulation, achievement, power, conformity and risk-atmosphere show a relationship with the employee creativity, based on the Manager's perception.

Following, next chapter will discuss the empirical results.

Chapter 6 - Discussion

In chapter 2, we discussed the major theoretical approaches used by research in organizational creativity. These theories belong to the broader category of Componential and Stage Models of Creativity. According to these theories, which are focused on understanding the creative process, creative expression proceeds through a series of stages or components, where the process can have linear and recursive elements. Although they take into consideration the effect of the context on organizational creativity, one problem with componential and interactionist approaches is that they limit the context to the immediate environment of the creative employee while culture and socio-cultural aspects that may affect creativity are not explicitly mentioned in these models.

Though they were not yet applied to the study of organizational creativity, theoretical approaches such as the system's view and the cultural psychology of creativity might provide a solid framework for the study of how the socio-cultural context, by shaping individuals' values and beliefs, may affect employee creativity.

Many organizational culture researchers agree that organizational culture is a contributing factor to the degree to which creativity and innovative behavior is found among employees in an organization although it's also recognized as and understudied topic and that more research should be done to better understand it.

Values are considered the core element of culture, and cultural values have been recognized by researchers as influencing creativity. As the purpose of this study is focused on the relationship between culture and employee creativity in the workplace, values have become the cornerstone in this research to link cultural environments with organizational creativity (both of them from the employee's perspective, in this study).

The current dissertation addresses the research question: to what extent does culture affect the creativity of employees at work? Concretely, the purpose of this study is to examine the effect of culture on perceived employees' creativity, at three distinct dimensions: national culture, organizational culture and individual stand-alone values. Thus, next discussion is proposed.

6.1 To what extent does culture affect on the self-perceived employees' creativity, at three distinct dimensions: national culture, organizational culture and individual stand-alone values?

Drawing on Glăveanu's (2010) cultural psychology of creativity, the effect of culture on EC has been examined employing a multidimensional model of the perceived employee creativity that takes into account culture's imprints at an individual level of analysis. In this model 13 hypotheses have been stated about employee creativity being dependent on three sociocultural dimensions: 1) the cultural stand-alone values of the individual

(self-perceived individual values); 2) the cultural profile of the work environment (self-perceived organizational culture) and, 3) the broader cultural profile of the employee's country or society, as self-perceived by the employee.

From empirical findings this study suggests that, certainly, there is empirical evidence that culture affects the perceived employee creativity, with different relationships at the three sociocultural dimensions under study.

Following empirical findings are discussed from the perspective of the purpose of this study.

From the employees' perception, a summary of the results obtained from empirical findings are exhibited in Table 6.1.1.

Table 6.1.1. Summary of Employee's Self-perception empirical results

Hypotheses	Significance Employee 's Self-Perception
H1-: Power Distance (PWD)	Not (PWD → - EC)
H2-: Collectivism –Individualism (IND)	No significance
H3-: Uncertainty avoidance (UNA)	Not (UNA → - EC)
H4 –: Femininity – Masculinity (MAS)	MAS → - EC
H5-: Control and Structure (SCH)	No significance
H6+: Supportive communication (SICC)	SICC → +EC
H7&H8+: Risk-taking orientation / Atmosphere (RTO/ATM)	No significance
H9+: Self direction (SDI)	No significance
H10+: Stimulation (STI)	No significance
H11+: Achievement (ACH)	No significance
H12-: Conformity (CON)	CON → - EC
H13-: Power (PWR)	No significance

Source: Self devised

Thus, according to empirical results, hypotheses H4, H6 and H12 are supported. Hypotheses H1 and H3 were not supported. And hypotheses H2, H5, unified H7&H8, H9, H11, and H13 didn't have statistical significance.

According to empirical findings on hypothesis 1, power distance had a positive relationship with EC, when self-perceived by the employee. So the hypothesis was unsupported.

This finding goes in the opposite direction of what was hypothesized based on the literature review in chapter 3. For instance, some researches state that high power distance may negatively affect the level of novelty and creativity (Bechtoldt et al, 2010; Kasof et al., 2007; Westwood and Low, 2003). And it is supposed that individuals belonging to high Power Distance culture are expected to score lower on creativity (Erez and Nouri, 2010). However, it's also true that 'lower' is not the same than 'none'. On the other side, trust-based control systems have been found to encourage constructive feedback and also to foster intrinsic motivation, both conducive to creativity in work settings (George and Zhou, 2001; Ford and Gioia, 2000).

So, empirical data from this study provide some support to an interpretation of results in which there might coexist both, EC and a strong deference to those that hold power (high Power Distance), just in case those powerful people were able to create a trustee environment. The empirical finding might be considered uncommon in previous research, as far as the author knows, and might be an insight for a potentially new interpretation developed deeper in section about conclusions and implications.

In relation with empirical findings on hypothesis 2, it was not found statistical significance of the relationship between individualism and EC.

In this study the influence of individualism – collectivism cultural domain on EC remains thus undefined. But it coincides with Hofstede's (2001) reflections about the inconclusive relationships between this cultural dimension and creativity. Literature review relates individualism with divergent thinking and creativity, but Sauquet (2003)

points out that different approaches are possible to solve problems through collectivistic culture as an Spanish cultural setting researched in his study. More research might be necessary to find conclusive results.

According to empirical findings on hypothesis 3, it was found a positive relationship between Uncertainty Avoidance and EC. So this hypothesis is unsupported.

Similar to results discussion aforementioned about Power Distance, this empirical finding goes in the opposite direction of what was hypothesized based on the literature review in chapter 3. Erez and Nouri (2010) point out that similar to the effect of Power Distance, cultures that emphasize Uncertainty Avoidance may restrain individuals deviating from the norm, a behavior considered necessary to discover new ideas. So, it is expected for individuals from high Uncertainty Avoidance cultures to score lower on creativity and even hinder it. However, as aforementioned about Power Distance, 'lower' is not the same than 'none', and it is not clear which is the reference used by employees and managers to assess if there is or not creativity.

The empirical finding might be considered uncommon in previous research, as far as the author knows, and could be an additional insight for a potentially new interpretation developed deeper in section about conclusions and implications.

With respect to empirical findings on hypothesis 4, it was found a negative relationship between Masculinity and EC. So this hypothesis is supported.

According to Hofstede (1994), the Femeninity dimension (the opposite to Masculinity) might be related with a stronger emphasis on 'support culture', and according to the literature reviewed in Chapter 3, it might stimulate creativity, because the feminine culture offers satisfaction through relationships, mutuality, belonging and connection, trust and helping each other, people communicating well and constructively challenging each other's work. Furthermore, this empirical finding might help build a potential more complex interpretation of these findings developed deeper later in section about conclusions and implications.

From empirical findings on hypothesis 5, it was not found statistical significance from employee's self-perception.

According to empirical findings on hypothesis 6, it was found a positive relationship between Supportive Communication and EC. So this hypothesis is supported.

This result is in line of Rice's (2006) study, according to which, responsibility to share expertise was the most important independent variable contributing to EC (in Egypt), what was consistent with earlier research in the United States and Taiwan. For example, Amabile et al. (1996) established that a variable representing openness and shared commitment (labeled ''work group supports'') was among the top three variables discriminating most strongly between high and low creativity projects in a US company. Likewise, supervision that is supportive is expected to promote creative achievements of the employee (Amabile & Gryskiewicz, 1987, 1989).

Empirical findings provide some support to an interpretation of results in which this hypothesis, joint with H4 (Femininity – Masculinity) might become a keystone of a potential more complex interpretation of these findings developed deeper later in section about conclusions and implications.

According to empirical findings on joint hypotheses 7 and 8, it was not found statistical significance from employee's self-perception.

Regarding empirical findings on hypothesis 9, 10, 11, and 13 it was not found statistical significance from employee's self-perception.

Departing from empirical findings on hypothesis 12, there was a negative relationship between Conformity and EC. So this hypothesis is supported. These empirical findings are aligned with what was expected based on previous research.

As a matter of conclusion, figure 6.1.1 depicts the resulting empirical model (red marked, hypotheses with statistical significance in opposite direction to what was presumed, and grey marked those cultural variables without statistical significance).

Figure 6.1.1. Resulting empirical model from Employees' perception
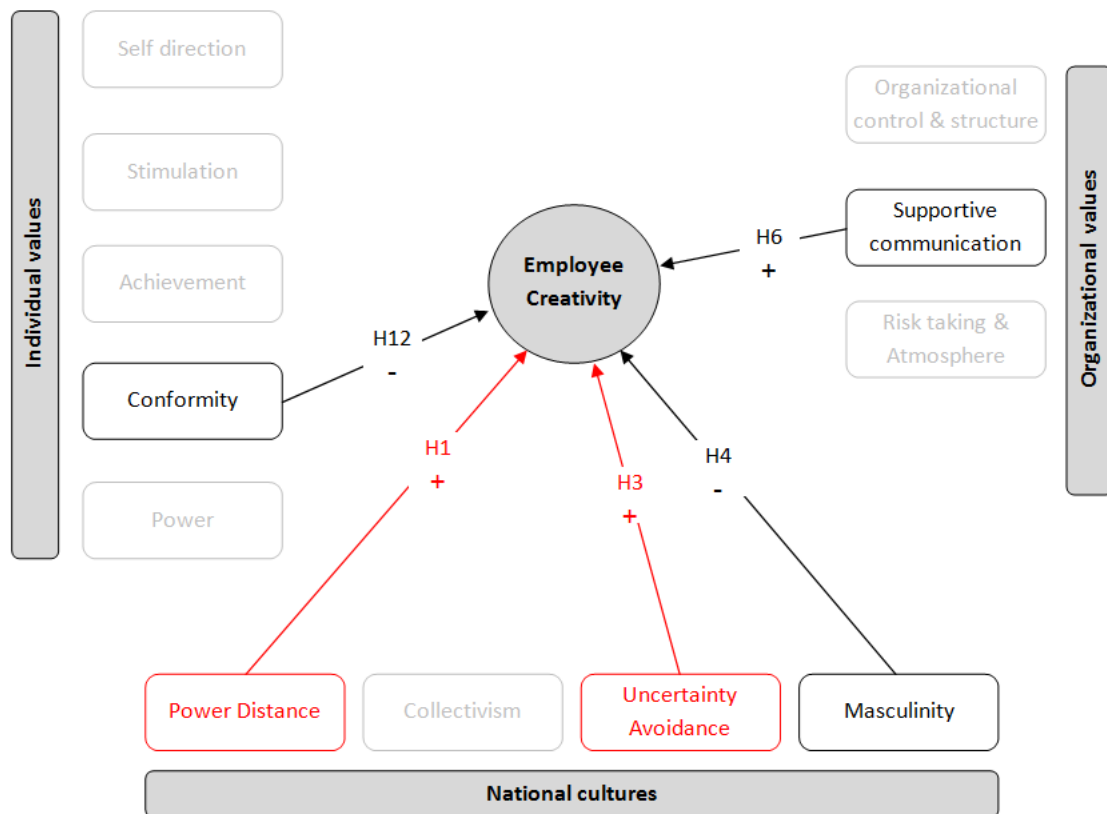
6.2 To what extent does culture affect on the employees' creativity, as perceived by managers' point of observation, at three distinct dimensions: national culture, organizational culture and individual stand-alone values?

On the other hand, from the validation point represented by managers' perception on their employees' creativity, a summary of the empirical findings obtained through data analysis are exhibited in Table 6.2.1.

Table 6.2.1. Summary of Manager's Perception empirical results

Hypotheses	Significance Manager's Perception
H1-: Power Distance (PWD)	No significance
H2-: Collectivism –Individualism (IND)	No significance
H3-: Uncertainty avoidance (UNA)	Not (UNA → - EC)
H4 –: Femininity – Masculinity (MAS)	MAS → - EC
H5-: Control and Structure (SCH)	SCH → - EC
H6+: Supportive communication (SICC)	SICC → +EC
H7&H8+: Risk-taking orientation / Atmosphere (RTO/ATM)	RTO/ATM → + EC
H9+: Self direction (SDI)	SDI → +EC
H10+: Stimulation (STI)	Not (STI → + EC)
H11+: Achievement (ACH)	ACH → + EC
H12-: Conformity (CON)	CON → - EC
H13-: Power (PWR)	PWR → - EC

Source: Self devised

From managers' validation point, some significant relationships were found, and other significant relationships were found but not detected from employees' perceptions. As a main conclusion, it should be remarked the fact that from managers' perception a greater number of significant relationships have been found in comparison with that of employees' perception. Some reflections are stated.

According to empirical findings on hypothesis 3, it was found a positive relationship between Uncertainty Avoidance and EC, in both cases, self-perception of the employee and manager's assessment of the EC.

With respect to empirical findings on hypothesis 4, it was found a negative relationship between Masculinity and EC, in both cases, self-perception of the employee and manager's assessment of the EC.

From empirical findings on hypothesis 5, it was not found statistical significance from employee's self-perception; and from manager's assessment of EC, there was a negative relationship between organizational control and structure and EC, what goes in the line of previous empirical findings. However, a deeper analysis in future research might be necessary to get a deeper understanding into the relationship of a high degree of Power Distance (that seems to be acceptable to be creative, as supported by H1) and a controlling and hierarchical structure with a negative relationship with creativity behavior (as H5 shows up).

According to empirical findings on hypothesis 6, it was found a positive relationship between Supportive Communication and EC in both cases, this is, self-perception of the employee and manager's assessment of the EC.

According to empirical findings on joint hypotheses 7 & 8, it was not found statistical significance from employee's self-perception, and there was a positive relationship between risk-taking orientation & atmosphere and EC, from manager's assessment of

EC. Statistical analysis has found that both variables, risk-taking orientation and workplace atmosphere, measure the same phenomenon, so they have been joint as one.

This result is aligned to previous empirical research. E.g., Badasur states that at an organizational level, risk-aversion and fear of failure are thought as barriers to innovation (Basadur, 1995; Altshuler, 1997; Maher and Plsek, 2009). Or as US empirical research indicates, supportive communication among employees and a caring atmosphere stimulates employees' creativity (Oldham and Cummings, 1996; Shalley and Perry-Smith, 2001; Zhou, 2003). Also highlighted by George and Zhou (2001) stating that when the work environment is negative, coworkers provide no encouragement or support for creativity and may actually inhibit it.

Regarding empirical findings on hypothesis 9, it was not found statistical significance from employee's self-perception, and there was a positive relationship between Self-direction and EC, from manager's assessment of EC.

And with respect to empirical findings on hypothesis 10, it was not found statistical significance from employee's self-perception, and there was a negative relationship between Stimulation and EC, from manager's assessment of EC. This goes, as far as known by the researcher, against what is stated in previous research, where it is supposed that being eager to have an exciting and varied life should enhance creativity. But some exceptions have been recorded, in some cases, from cultural frameworks different to the Anglo-Saxon (in which most of the creativity studies have been performed). An example is illustrated by Rice (2006) who found that, also with the

exception of the value type Stimulation, the relationships between EC and the value types for the Egyptian respondents were as generally hypothesized, and that taking into account that Schwartz (2005) distinguishes the value types of Stimulation as the need for variety, Rice suggested that it was not the case for the Egyptian employees participants in that particular study, where the need for variety in one's life appears to be negatively related to creativity, because an exciting life might be interpreted in very different ways depending on the cultural background of the person. Thus, a similar suggestion might be inferred for Spanish employees that participated in this study.

According to empirical findings on hypothesis 11, it was not found statistical significance from employee's self-perception, and there was a positive relationship between Achievement and EC, from manager's assessment of EC. And departing from empirical findings on hypothesis 12, there was a negative relationship between Conformity and EC, in both cases, self-perception of the employee and manager's perception of the EC. Both empirical findings are aligned with what was expected based on previous research.

Finally, regarding empirical findings on hypothesis 13, it was not found statistical significance from employee's self-perception, and there was positive relationship between Power and EC, from manager's perception of EC. This is as expected from previous research. E.g, as pointed out by Rice (2006) a negative relationship would be expected between employee creativity and Power value type given its defining goals

(i.e. social status and prestige) which are typical of an outward orientation (extrinsic), and so contrary to the intrinsic orientation most commonly related with creativity.

As a matter of conclusion, figure 6.2.1 depicts the resulting empirical model (red marked, hypotheses with statistical significance in opposite direction to what was presumed, and grey marked those cultural variables without statistical significance).

Figure 6.2.1 Resulting empirical model from Managers' perception
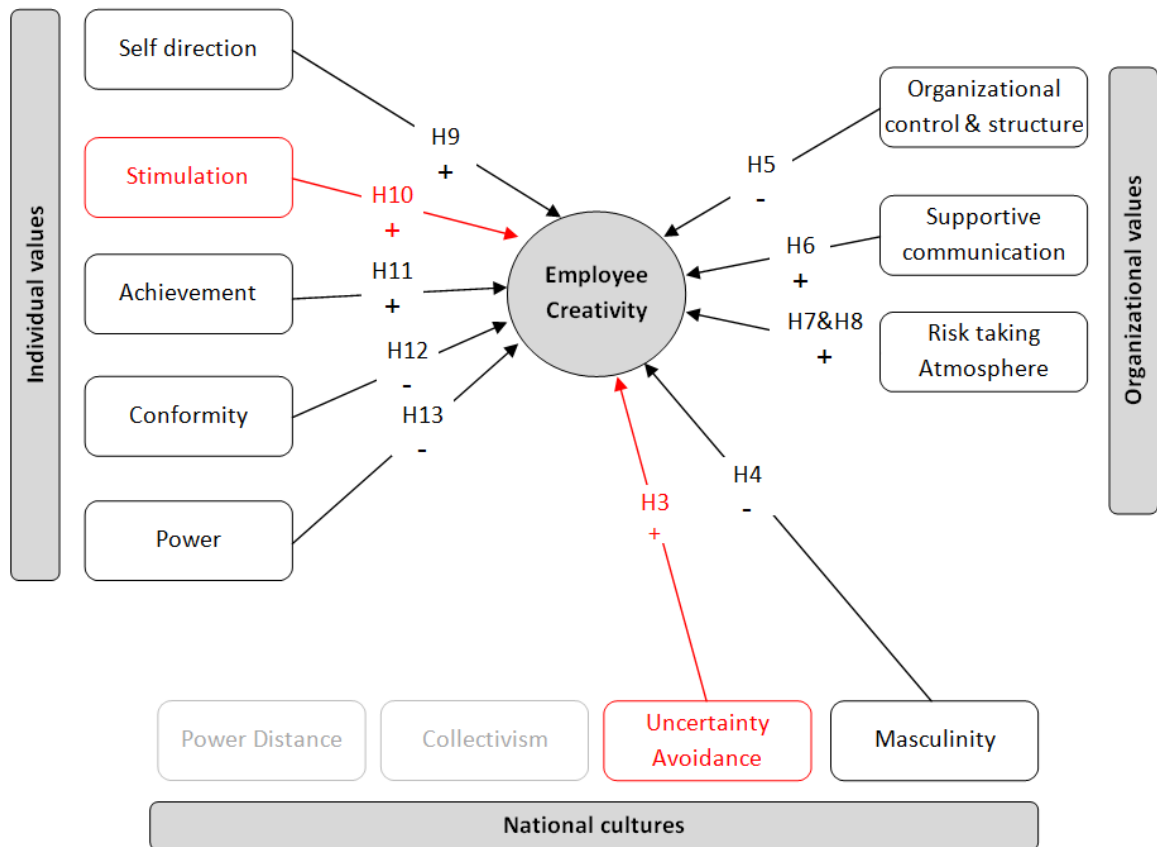
Source: Self devised

6.3. Chapter Summary

The current dissertation addresses the research question: to what extent does culture affect the creativity of employees at work? Concretely, the purpose of this study is to examine the effect of culture on perceived employees' creativity, at three distinct dimensions: national culture, organizational culture and individual stand-alone values.

Drawing on Glăveanu's (2010) cultural psychology of creativity, the effect of culture on EC has been examined employing a multidimensional model of the perceived employee creativity that takes into account culture's imprints at an individual level of analysis. In this model 13 hypotheses have been stated.

From empirical findings this study suggests that, certainly, there is empirical evidence that culture affects the perceived employee creativity, with different relationships at the three sociocultural dimensions under study.

In this chapter we provided a discussion of the results obtained in the empirical application of the current dissertation. The results supported some of the stated hypotheses. In the case of national culture dimensions, hypotheses H1 (Power Distance) and H3 (Uncertainty Avoidance) based on previous research, have not been supported, becoming a potential insight in a different set of relationships between broad cultural context and employees' creativity in a Spanish setting.

Nevertheless, hypothesis H4 (Masculinity versus Femininity) and H6 (Supportive Communication) were supported, opening a potential reflection about their potential joint influence with not supported H1 and H3, resulting in a global positive influence on EC (studied in more detail in chapter 7).

Hypothesis H12 (Conformity) was supported by empirical data.

The variable of Hypothesis H2 (Individualism) had none statistical significance from both points of observation, employees' self-perception and managers' assessment, reinforcing the controversy in previous research about whether individualism – collectivism has or not an influence on creativity.

It was also discussed that from the perspective of the employees' self-perception analysis, most of the hypotheses had none statistical significance. However, from the perspective of a third-person assessment analysis (the managers' perception) most of the hypotheses had statistical significance based on the empirical data of this study.

In fact, according to empirical findings on the whole set of hypotheses from H1 to H13, this study has found that from the manager's perception, 9 out of 13 hypotheses attained statistical significance and in the direction hypothesized in Chapter 3, whilst from employees' self perception only 3 out of 13 hypotheses have been supported, 2 were not supported and 7 out of 13 didn't attain statistical significance. Under the light of these findings, a reflection might be proposed around the usefulness to develop future research focused on manager's perceptions upon the purpose of this study. The

researcher considers that this empirical finding might represent some relevant implications that will be explained deeply in section about conclusions and implications.

Following, next chapter will interpret conclusions and implications of the discussed empirical results.

Chapter 7 - Conclusions, implications and directions for future research

7.1. Main conclusions of the study

In this study we discussed the major theoretical approaches used by research in organizational creativity. These theories belong to the broader category of Componential and Stage Models of Creativity. Although they take into consideration the effect of the context on organizational creativity, one problem with componential and interactional approaches is that they limit the context to the immediate environment of the creative employee while culture and socio-cultural aspects that may affect creativity are not explicitly mentioned in these models.

Although they were not yet applied to the study of organizational creativity, theoretical approaches such as the system's view and the cultural psychology of creativity might provide a solid framework for the study of how the socio-cultural context, by shaping individuals' values and beliefs, may affect employee creativity.

Many organizational culture researchers agree that organizational culture is a contributing factor to the degree to which creativity and innovative behavior is found among employees in an organization although it's also recognized as an understudied topic and that more research should be done to better understand it.

Values are considered to be the core element of culture, and cultural values have been recognized by researchers as influencing creativity. As the purpose of this study is focused on the relationship between culture and employee creativity in the workplace, values have become the cornerstone in this research to link cultural environments with organizational creativity (both of them from the employee's perspective, in this study).

The current dissertation addresses the research question: to what extent does culture affect the creativity of employees at work? Concretely, the purpose of this study is to examine the effect of culture on perceived employees' creativity, at three distinct dimensions: national culture, organizational culture and individual stand-alone values.

Drawing on Glăveanu's (2010) cultural psychology of creativity, the effect of culture on perceived EC has been examined employing a multidimensional model of the perceived employee creativity that takes into account culture's imprints at an individual level of analysis. In this model 13 hypotheses have been stated about employee creativity being dependent on three sociocultural dimensions: 1) the cultural stand-alone values of the individual (self-perceived individual values); 2) the cultural profile of the work environment (self-perceived organizational culture) and, 3) the broader cultural profile of the employee's country or society, as self-perceived by the employee.

From empirical findings this study suggests that, certainly, there is empirical evidence that culture affects the perceived employee creativity, with different relationships at the three sociocultural dimensions under study. Based on these empirical findings, following main conclusions might be highlighted.

First, this study joints to those who show the usefulness to continue developing this type of research in countries, geographies or cultural settings, that are assumed to be significantly different to the most common cultural environment studied nowadays, this is, the Anglo-Saxon sphere. In fact, this study explains empirical data that provides some support to the interpretation that (like other previous similar studies) different empirical findings can be discovered, extending the nuances and the understanding of a more complex reality around cultural contexts and their influence on employees' creativity.

Second, this study explains empirical findings that might drive to a possible different interpretation of the influence of national cultural dimensions on employees' creativity. The empirical findings about the fact that high levels of Power Distance or Uncertainty Avoidance might not hinder creative manifestations in certain Spanish cultural settings, is nowadays understudied, as far as the researcher knows, whilst it is already signaled by multiple authors in other cultural settings, as a possible different interpretation of these influences when compared with what is assumed generally in Anglo-Saxon cultural setting studies.

Third, based on empirical data, it is suggested as a contribution of this study, the potential interpretation of results around the supported hypotheses that Femininity and Supportive Environment might have a positive influence on EC, coexisting with high Power Distance and Uncertainty Avoidance, thus becoming all these cultural conditions as a cultural set of a new organizational social process where creativity might be

enhanced and nurtured. This could open the door to the need to study deeply the inter-relationship among Supportive Environment, Femininity, Power Distance and Uncertainty Avoidance in cultural contexts similar to those of Spain, and it will be more extensively explained in next section of theoretical implications.

Fourth, and also as an unexpected contribution of this study, the empirical findings from using the manager's perception of employee creativity as a validation point, suggests that if might be of interest to continue developing the purpose of this study in future research, from the manager's perception, not only for the employee creativity, but also for the rest of independent variables.

And finally, empirical findings of this study might provide support to the interpretation of results by which specifically Spanish related cultural environments have potentially, in some cases, different influences on EC than the ones presumed by most studies developed within an Anglo-Saxon general context. This implication adds up to the first conclusion above explained, but more concretely addressed to Spanish settings.

Following, in section about implications, some of the above reflections and conclusions will be further developed.

7.2. Theoretical Implications

This research suggests that some of the empirical findings in this study might be interpreted with some potential implications that could be of interest for the scientific community.

Summing up to reflections developed in the Discussion chapter, next sections will get deeper into some additional insights already underlined in the conclusions section, specially around some unexpected empirical findings.

7.2.1. Is it possible to enhance employee creativity in a 'high deference to power and risk aversion' cultural context?

A major contribution of this study has to do with the aforementioned empirical data regarding hypotheses about Hofstede's national cultural dimensions at an individual level, H1 (Power Distance), H3 (Uncertainty Avoidance), H4 (Masculinity), and hypothesis about organizational context H6 (Supportive Communication), might provide some support to an interpretation of results different to what is commonly supported by previous research.

This new interpretation might be conceived as an organization's social process influenced by its cultural setting context.

This new perspective of organization's social process would consist on employees who show creative behavior, in spite of having cultural values of high Power Distance and high Uncertainty Avoidance, but at the same time, feeling themselves more (even rightly) protected in their workplace by a supportive cultural context reflected by cultural values of high Femininity, and a high Supportive Communication organization's environment.

Empirical findings provide some support to an interpretation of results in which the aforementioned organization's social process, could become a right match among the studied values, that permits the employee to have the necessary confidence to put into action their creativity, in spite of an environment that is presumed by previous research to hinder creativity. In this interpretation, Supportive Communication and Femininity would be related with a strong emphasis on 'support culture' (as named by Hofstede, 1980) in their organizations. This supportive cultural context (as pointed out in the literature review) might enhance creativity, because the femininity culture offers satisfaction through relationships, mutuality, belonging and connection, trust and helping each other, people communicating well and constructively challenging each other's work (Hofstede, 1994).

As Rank (2004) states, while low uncertainty avoidance, low power distance, high masculinity, and high individualism may positively relate to creativity, moderate levels of these values may facilitate the implementation of innovations advocated by higher level authorities. This statement, might help to the interpretation, based on our empirical

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findings, that a high Power Distance, when moderated with other values, could help employees (e.g., delegating on supervisors and managers the important decisions and job frameworks definition) self-limiting their creative contributions to the boundaries marked by superiors, and thus relaxing to cope with their high Uncertainty Avoidance when behaving creatively and contributing with different or unexplored ideas (within the aforementioned boundaries). There is no doubt that this interpretation would need future research to be supported.

In fact, this conditions to be relaxed to be creative could be assimilated to the role of the relationship between leaders and employees in Spanish organizations as researched by Sauquet (2003) "The pattern of Spanish national culture in terms of power distance, uncertainty avoidance, individualism/collectivism, and masculinity leads to a strong orientation toward rules and deference to leadership. Group harmony as validation of the individual is a strong value inhibiting open disagreement and generative conflict. Leaders play a central role in framing norms that support both the collective identity of the group and task accomplishment". The possibility to enhance creativity in such a cultural context, might be reinforced by Lampikoski and Emden (1996) who state that Japanese collectivist values tend to favor incremental innovations, especially in processes based on general agreement and compromise. Although such cultural orientation inhibits individual expression, there is a feeling of being part of a collective entity working together towards a common end, such as the benefit of the corporation. Thus, Japanese workers are able to suppress ego and direct their efforts to collective objectives more than to individual interests. Pascale and Athos (1981) argue that such a

value orientation comes from a dislike of problems, which are considered as things to be eliminated by the quickest analytical methods. Particular traits of Japanese culture include the avoidance of conflict and open criticism on an individual level, but within a group or at organizational level, uncertainty can be acknowledged and experimentation and suggestions accepted.

The view from Sauquet (2003) and Pascale (1981) is also in the line of Trevelyan (1999) who suggests that thinking outside the status quo does occur in collectivistic cultures where group work and harmony mean that any possible conflicts arising from divergence can be controlled. The collective orientation also allows individuals to make contributions that are considered as being for the collective good, resulting in cohesiveness from shared goals. Thus, a safe environment is provided for people's suggestions and creative ideas. This 'safe environment' is what the researcher suggests to remark, as it can be also achieved somehow from a Femininity context, and might be assimilated as traits of a 'support culture'.

This interpretation of the empirical data of this study might also entail the interpretation that employees who don't share a high power distance, and a high uncertainty avoidance might have to cope with a personal mismatch with the organization's cultural context depicted in this section, clashing up with the supervisors' specific supportive style and with the co-workers specific communication style, that could end up, counterintuitive as it might seem, in a kind of frustration and not contributive attitude, that eventually would turn out in a non creative behavior.

These empirical findings and the above interpretation of results would be in line with previous research on creativity. Rice (2006) found that in Egyptian organizations it was confirmed theories and findings based on Japanese, European, and US studies, 'pertaining' to the role of a caring, supportive environment; and not corroborating theories implying that EC would be hindered by a controlling, hierarchical organizational environment, and stated as a matter of conclusion that as organizational contexts differ in different societies, different social processes might be conducive to creativity. For instance, structured hierarchy is opposed to what Martins and Terblanche (2003) indicates as a flat structure that facilitates decision making across different functional areas (and so creativity enhancement) by granting more autonomy and by enabling the access to top management. But to build this kind of flat structures is intuitively inconsistent with employees that have a high deference to powerful people. Furthermore, Arad, Hanson and Schneider (1997) empirical research provides evidence that relates employees' freedom with higher creativity. But once again, freedom, in an organizational context, might be intuitively inconsistent to employees' risk-aversion and intolerance to ambiguity, in a high Uncertainty Avoidance culture. On the other hand, these inconsistencies would disappear in a context where as organizational contexts differ in different societies, different social processes might be conducive to creativity.

In this line, Trompenaars and Hampden-Turner (1998) argue, that in countries with large power distances (such as Spain), typically reflected in structured, hierarchical work environments, the dependence on powerful people is a basic need that can be a real motivator. And such an environment is not incompatible with a caring atmosphere,

work enjoyment, and a requirement for employees to provide initiative and ideas (Rice, 2006). It has been found that when this context works in such cultural environments, employees can perceive themselves as creative, in spite of a controlled, hierarchical work setting, even when compliance and obedience are expected. Similarly, Gómez and Ranft (2003) report that the Mexican high collectivism may be a positive factor easing work teams and this occurs despite an authoritarian culture. Harackiewicz (1979) demonstrated that individuals who were given positive informational feedback about their task performance (i.e., you performed better on these puzzles than the average participant) exhibited higher levels of intrinsic motivation than individuals who were given no feedback. Tierney, Farmer, and Graen (1999) found that open interactions with supervisors and the receipt of encouragement and support lead to enhanced employee creativity.

All these types of feedback, although studied by some of above authors from a collectivistic perspective, it is supposed to be also possible in a supportive cultural environment, more usual in a feminine culture than in a masculine one, as mentioned above.

As a matter of conclusion, this empirical research might provide support to an interpretation of results in which a different organization's social process (as defined at the beginning of this section), may turn the above intuitively supposed inconsistencies into faked ones that might have been (wrongly) fed along the time by a dominant

approach of studies developed on a single, and also dominant, cultural setting (Anglo-Saxon).

7.2.2. About the employee creativity perception's point of observation and about measurement instruments used in this study

First, and as a second major (and unexpected) contribution of this study, it has to do with the EC self-perception assessment that has been used in this study as a methodological approach to investigate individual, organizational and cultural context values, all of them at an individual level of analysis, and their relationships with employees' creativity. In this research employees' managers were also asked, as third-person observers, to assess and validate their employees' creativity. Remarkable different empirical results have been found depending on the main observation point used, this is, (employee's) self-perception, and the validation point of (manager's) third-person observation.

In this sense, in chapter 4 about Empirical Method, it is explained that Self-perception theory postulates the validity of the first-person as an observer of her own behaviors, as well as a third-person as an observer of another individual's behaviors. On the other side, social psychologists have long been critical of behavioral analyses of social interactions because they feel that there is something more to interpersonal perception

than just responding to the overt behavior of another individual. This 'interpersonal' reflection might be considered specially relevant as the conceptual framework of this study is based on a cultural psychology and systemic approach. Regarding doubts aforementioned as "there is something more to interpersonal perception", the methodological triangulation pointed out in chapter 4 (Empirical Method) might be helpful. In this context 'something more' might be interpreted as the fact that reality is complex enough to simply trying to grasp its nuances through a self-perception observation of own behaviors. Thus, the methodological triangulation just signaled in this research through manager's perceptions as a validation point, might help to diminish social psychologists' concerns. Triangulation combines several research methodologies to study the same phenomenon (Denzin, 1970) to resolve difficulties in interpretation and theory building, and different types of triangulations are pointed out. In this study, as a matter of conclusion for future research, it is proposed the investigator triangulation type (Jack, 2006) that consists on the use of multiple, rather than single observers. Based on empirical findings of this study, it is found convergent inferences among observers regarding hypotheses H3, H4, H6 and H12, whilst it is found complementary inferences regarding hypotheses H1, H5, H7&H8, H9, H10, H11, and H13.

Thus, empirical findings in this study suggest that it might be of interest to continue developing the purpose of this research from manager's perception in future research, to observe not only the employee creativity as it has been made in this study, but also the manager's perception of all the independent variables of our theoretical model, owed to

the fact that it has been possible to obtain in this study significant relationships among variables that were not detected from employee's perception.

Second, in another vein, this dissertation, in chapter 3 (Concept Model and Hypotheses) has put under scrutiny the use of Schwartz and Hofstede's value measures at the same time in this study. In our conceptual framework, both 1) the individual stand-alone values, and 2) the outer cultural context, represent two key elements to be studied regarding values. This study suggests that Schwartz and Hofstede, although being sometimes competing approaches in cross-cultural studies, represent two complementary approaches useful for the purpose of this study.

Based on the studies of Schwartz (1992, 1994) and Hofstede (1980, 2009), it is suggested that both might be compared in terms of the motivational goals (the values' nature) and the response to universal requirements (the values' sense) of the target under study (the values' domain). As a result of this comparison (and after a necessary adaptation of Hofstede's dimensions to an individual level) presumably both theories agree on one set of values although they have different typological denomination, and interestingly for the purpose of this study, it is also presumed that at the opposite end of each theory, they study some values that the other doesn't contemplate. This might be also true specifically for values from both measures that are related with the employee creativity. This is the reason for using both measures.

The suggested conclusion is that both measures are not neither mutually exclusive nor repetitive, but quite the contrary, both agree in certain areas and also complement each

other's areas of interest. This consideration might be useful for other studies with similar purpose when facing the dilemma about which measure to use.

7.2.3. Extension of the knowledge about cultural contexts and EC in Spain

For the purpose of this study, it's interesting to highlight that one of the most prominent figures in cultural research, Geert Hofstede (his seminal book, Culture's Consequences published originally in 1980 and re-edited in 2001, have been cited over 69,000 times in Google Scholar), found empirical data about the main cultural traits of nations, where Spain showed a relatively high Power Distance, high Uncertainty Avoidance, low Masculinity, and low Individualism. These four dimensions have been studied in theoretical models and empirical research in relation to creativity. Generally speaking, based on related empirical findings, it would seem that Spain (observed at a national level, and so, it doesn't imply Spanish people at an individual level) might face serious difficulties in offering the right cultural environment to nurture creativity, at least, compared with other countries of reference, according to Hofstede's empirical findings.

On the other hand, recent research developed outside the dominant Anglo-Saxon culture, has started to show that preconceived creativity factors thought as universally valid to enhance creativity, are at least more than debatable.

It is in this context, that the current study intends to contribute extending the knowledge around the influence of cultural contexts on creativity in the workplace. The contribution hence, remains in the study of a sample of Spanish organizations from diverse industries and from a perspective based on the approach of cultural psychology of creativity. From this approach, this study gets into the specific dimensions of individual human values defined by Schwartz's (1994), the national cultural dimensions defined by Hofstede (1980) adapted and analyzed at an individual level, and a set of variables that draw an organizational context especially relevant to employee creativity, as proposed by Rice (2006).

This study has found empirical data that might provide support to an interpretation of results in which the development of this research in Spain, might be considered somehow contributive for the scientific community, just taking into account the significant differences that (in some variables) have been found in the relationship between cultural context variables and the employees' creativity, when comparing results of a Spanish context with most of the commonly researched Anglo-Saxon contexts.

Notwithstanding, creating a certain universal model in this domain of research is considered to be a daunting task, in which this study tries to provide a rigorous but limited contribution, when compared with other seed or high scope investigations.

Eventually, the significance of the specific potential contribution of this study in a Spanish setting, might be considered under the perspective that organizational creativity

research that examines the effect of culture-related aspects on employees' creativity, is as far as is known by the author, relatively scarce, as explained in Chapter 1, and in which it is claimed that this study falls in the scholars' framework which state that, in addition to individual characteristics such as education, cognitive type, personality or motivation, the employee creativity is also a function of their cultural identity and the cultural values that they hold.

7.3. Practical Implications

Based on empirical findings, it is provided some support to the interpretation of some practical implications for management programs intended to nurture an increased creativity of employees.

Might it be needed a different approach to that of current corporate programs, to nurture employees' creativity? Towards the goal to adapt corporate programs to the singularities of the Spanish cultural context.

As earlier explained, empirical findings might provide some support to the interpretation under which employees who share a high power distance, and a high uncertainty avoidance, could feel themselves more (even rightly) protected by a supportive cultural context from a high feminine and a high supportive communication, that in fact, could become the right match among values (Power Distance, Uncertainty Avoidance, Femininity, Supportive Communication) that permits to employees the necessary confidence to put into action their creativity.

If this was the case for some Spanish organizations, similar to the sample under study, it might have important practical consequences in front of what nowadays are the mainstream corporate programs implemented to enhance creativity in organizations. The rationale is, as far as the author knows, that most of this corporate programs are

inspired, if not simply imported or copied from Anglo-Saxon (especially USA) best practices.

So, assuming that these USA-inspired practices are the most common approach selected by Spanish organizations, and also assuming that specific future research on Spanish settings would confirm the empirical findings of this study, then it might be stated that an important mismatch is taking place in the practical results of this kind of corporate programs compared with what it might be expected, and new approaches and recommendations should be developed in the future to better respond to the singularities shown by Spanish employees' creativity in their cultural contexts.

What's the relative importance of feedback from managers to creative employees? Towards the goal to re-inforce self-appraisal of the employee creativity.

As mentioned in Chapter 6, empirical data obtained from this study on hypotheses H1 (Power Distance), H3 (Uncertainty Avoidance), H4 (Masculinity) about Hofstede's national cultural dimensions, and H6 (supportive communication) about organizational context, provides some support to a new perspective around an organization's social process influenced by its cultural setting context. In this specific social process employees would share values of high power distance, and a high uncertainty avoidance, while feeling themselves more (even rightly) protected by a supportive cultural context reflected by high Femininity, and a high supportive communication,

that in fact, could become the right match among former values, that permits the employees the necessary confidence to put into action their creativity, in spite of an environment that is presumed to hinder creativity. Just in case that these empirical findings and interpretations were reconfirmed by others studies, it would open the door to interesting recommendations for practitioners. This is, from a practitioner's point of view it might be translated into necessary practices of positivistic feedback from managers to employees, based on supportive communication, interaction and monitoring. Where these practices would represent in fact, some workplace environment characteristics (as defined by a feminine culture society) that emphasize a 'support culture', to stimulate creativity, offering satisfaction through relationships and trust.

Would it be possible for two different functional areas to have different employees' creativity behavior? Towards the importance of top managers as the cultural reference influencing employees' creativity in the organization.

Two functional areas might have different patterns of behavior when coping with the organizations' problems, and also might have different kind of individuals' cultural traits based on a different composition of the staff of each area.

Managers might represent the core values of the organization. According to Barney (1986) the organizational culture includes the set of core managerial values about how to treat employees, customers, suppliers and others that define the ways organizations conduct business, being these values the ones that foster innovativeness and flexibility

in firms. Managers might have different individual stand-alone values, and furthermore, different broad cultural contexts from childhood to adult age, or different cultural experiences from their professional careers.

According to Schwartz (1994), values are prioritized by each individual, and behaviors may emerge from the individual conflict between opposed ingrained values to respond to an specific situation. When conflict and prioritization is at stake, then managers are at an advantage position to impose their values and beliefs, due to their authority in the hierarchy. Because of this, managers might have a potentially key role in shaping the culture of an organization, influencing dramatically the organizational culture towards employees' creativity, and aligning a creativity policy among the different functional areas in the organization.

7.4 Limitations and directions for future research

With no doubt, one of the main concerns of the author all along this research, have been the possible limitations that could be identified as weaknesses of the study, and that might affect the rigorousness, and thus the usefulness, of its contribution to the scientific community. Two ways to face this challenge were: 1) cautiously redefine the scope of this study, to acquire a level of rigorousness as required by a scientific methodology; 2) turn out weaknesses into opportunities as lines of future research to enrich the extension and/or the perspectives developed in this study.

Following, we point out some limitations that, at the same time, would open the door to further research in order to get a better understanding of the goals pursued by this study.

One limitation of this study is the sample size. This study provides empirical evidence after observing and analyzing data for a total number of 198 employees from 10 different organizations. Taking into account that the purpose of this study is bounded by Spain's cultural settings, the potential population of employees to show creativity would be the number of active employees in the country (18,048,700 employees according to the Instituto Nacional de Estadística of Spain, 2015). Thus, given the size of our sample (198 employees) and also the fact that they were not chosen randomly (among the entire population), but based on the possibilities of access of the author to some organizations, it should be stated that this sample is by no means representative of the entire population, and in consequence, this study will specifically provide empirical evidence from 10 Spanish organizations, on the purpose of this research. Hence, generalizations of the findings reported in this study should be done with caution. Additionally, the lack of significance found in some of the hypotheses of this research might be caused by an insufficient size of the sample under study. Furthermore, the findings reported in this study are limited to certain economic sectors. Different industries may exhibit different cultural contexts, and hence, organizational cultures and creativity attitudes may vary according to the economic sector, and functional areas. In summary, it would be necessary some future research increasing the size of the sample through investigating other industries, organizations, functional areas and geographies in Spain, and

developing studies in other countries with similar national cultural dimensions to those of Spain.

Additionally, when increasing the size of the sample it might be very relevant to develop a multilevel research, to include not only the individual level, but also the organizational, industry and society level of analysis. This direction of future research could help to a better understanding of the employee creativity ruling out variations explained by organization, industry or society characteristics.

When put under scrutiny the research methodology approach used by this study, we can observe some clear limitations. As mentioned in this dissertation, this study can be qualified as 'cross-cultural' based on Nasif (1991) definition. As mentioned in Chapter 4 about empirical methodology, Abridah (2012) states that most cross-cultural research is based on a realistic perspective and adopts a positivistic/analytical research strategy, and as Collis and Hussey (2003) indicate there are two main paradigms from which a research design can be derived from: positivism and phenomenology, where positivism implies quantitative, scientific, experimentalist and traditionalist approach. As a consequence this researcher chose a quantitative methodology approach for this study. Nevertheless, culture related research is difficult to grasp due to its extension and intangibility. So, qualitative research around the hypotheses proposed in this study would be very helpful, not only to extend empirical findings but also to explore complementary perspectives that can be only gathered through case-based

methodologies or other qualitative techniques, e.g. with interviews to get insights from employees of their (not easily) explainable values and beliefs.

The input measure of creativity through employee self-perception was contrasted with a validation point based on manager's perception of the employee creativity. When surveyed, managers in most cases didn't have a formal record of the number of ideas generated by employees or the ideas themselves. What's more, their perceptions were not expressed, when surveyed, just at the moment employees showed their creativity or contributions, so it had to be based on memories (during the last 12 months of interaction with the employee), and so their observations about their employees' creativity should be taken with caution. Precisely, due to a cross-sectional method design used in this study, this limitation itself points out the need of future research developing longitudinal studies. Where organizations could be invited to record by formal means what they would consider as significant employee creativity, during a controlled time interval.

The researcher would also highlight the limitations that come from the necessary Spanish translation and use of English instruments of measurement. The limitation of translating them from English, especially when cultural variables are at stake, should be taken into account due to the subtle meanings and interpretations of these variables by people surveyed, as well as the inherent difficulties to articulate anything related with ingrained values and beliefs of an individual. Future research might help to increase the reliability of the instruments in the Spanish cultural context and language.

Finally, it should be considered as a limitation the proposed conceptual. The purpose of this study in relation to researching the influences that cultural contexts could have on EC, is inevitably limited by the proposed conceptual model itself. This has a definitive impact on the scope of what is investigated, and more importantly, an impact on what is left out of the scope of this investigation. Future research would be necessary 1) exploring evolved meanings of the variables at stake, and their impact as potential predictors of the relationships under study, and 2) exploring evolved combination of culture-related variables and models that might help to a more reliable understanding of the relationships between cultural environments and employees' creativity.

Chapter 8 - References

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Chapter 9 – Appendix

APPENDIX 1: Managers' Assessment Questionnaire

Nombre y apellidos (opcional)		
PER1. Edad	PER2. Sexo: (H/M) ☐ Hombre ☐ Mujer	PER3. Nacionalidad
PER4. Años de experiencia laboral		PER5. Años de experiencia en la compañía
PER6. Educación ☐ Graduado escolar ☐ Formación profesional ☐ Bachillerato ☐ Universidad ☐ Doctorado		PER7. Si Universitario, especificar carrera
Nombre del empleado sobre el que va a responder las preguntas:		

Comportamiento creativo del empleado		1 Totalmente en desacuerdo	2 En desacuerdo	3 Ni de acuerdo ni en desacuerdo	4 De acuerdo	5 Totalmente de acuerdo
EC1	A menudo, mi subordinado produce nuevas ideas originales	☐	☐	☐	☐	☐
EC2	A menudo, mi subordinado produce ideas útiles	☐	☐	☐	☐	☐
EC3	Mi subordinado experimenta con nuevas aproximaciones para hacer su trabajo	☐	☐	☐	☐	☐
EC4	Mi subordinado está atento a nuevas ideas de la gente con la que interacciona en su trabajo	☐	☐	☐	☐	☐
EC5	Mi subordinado intenta ser tan creativo como puede en su trabajo	☐	☐	☐	☐	☐
EC6	Cuando realiza bien su trabajo, mi subordinado lo hace por su propio deseo de logro	☐	☐	☐	☐	☐

Durante los últimos 12 meses		1 De 1 a 5	2 De 6 a 10	3 De 11 a 15	4 De 16 a 20	5 Más de 20
EC7	Mi subordinado ha introducido "X" ideas creativas	☐	☐	☐	☐	☐
EC8	Mi subordinado ha introducido "X" nuevas ideas originales	☐	☐	☐	☐	☐
EC9	Mi subordinado ha introducido "X" ideas útiles	☐	☐	☐	☐	☐

APPENDIX 2: Employees' Self-Perception Questionnaire

Nombre y apellidos (opcional)		
PER1. Edad	PER2. Sexo: (H/M) ☐ Hombre ☐ Mujer	PER3. Nacionalidad
PER4. Años de experiencia laboral		PER5. Años de experiencia en la compañía
PER6. Educación ☐ Graduado escolar ☐ Formación profesional ☐ Bachillerato ☐ Universidad ☐ Doctorado		PER7. Si Universitario, especificar carrera

Comportamiento creativo del empleado	1 Totalmente en desacuerdo	2 En desacuerdo	3 Ni de acuerdo ni en desacuerdo	4 De acuerdo	5 Totalmente de acuerdo
EC1 A menudo produzco ideas originales	☐	☐	☐	☐	☐
EC2 A menudo produzco ideas útiles	☐	☐	☐	☐	☐
EC3 Experimento con nuevas aproximaciones para hacer mi trabajo	☐	☐	☐	☐	☐
EC4 Estoy atento a nuevas ideas de la gente con la que interacciono en mi trabajo	☐	☐	☐	☐	☐
EC5 Intento ser tan creativo como puedo en mi trabajo	☐	☐	☐	☐	☐
EC6 Cuando realizo bien mi trabajo, sé que es por mi propio deseo de logro	☐	☐	☐	☐	☐

Durante los últimos 12 meses	1 De 1 a 5	2 De 6 a 10	3 De 11 a 15	4 De 16 a 20	5 Más de 20
EC7 He introducido "X" ideas creativas	☐	☐	☐	☐	☐
EC8 He introducido "X" nuevas ideas originales	☐	☐	☐	☐	☐
EC9 He introducido "X" ideas útiles	☐	☐	☐	☐	☐

Distancia de poder (Piensa en tu entorno social y contesta)	1 Muy de acuerdo con la posición situada a la izquierda	2 De acuerdo con la posición situada a la izquierda	3 Muy de acuerdo con una posición intermedia entre ambos extremos	4 De acuerdo con la posición situada a la derecha	5 Muy de acuerdo con la posición situada a la derecha	
PWD1 La desigualdad en la sociedad debe ser minimizada	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Debe existir un régimen de desigualdad en el mundo

		1	2	3	4	5	
PWD2	Los superiores consideran a sus subordinados como iguales	☐	☐	☐	☐	☐	Los superiores consideran a los subordinados como no iguales
PWD3	Los subordinados consideran a sus superiores como iguales	☐	☐	☐	☐	☐	Los subordinados consideran a sus superiores como gente de otra elite
PWD4	Los superiores son accesibles	☐	☐	☐	☐	☐	Los superiores son inaccesibles
PWD5	Aquellos que poseen poder deberían mostrarse menos poderosos de lo que son	☐	☐	☐	☐	☐	Aquellos que poseen poder deberían mostrarse lo más poderosos posible
PWD6	La Cooperación entre los que no tienen poder se puede basar en la solidaridad	☐	☐	☐	☐	☐	La Cooperación entre los que no tienen poder es difícil de alcanzar
PWD7	El trabajo resulta más satisfactorio si responde a los objetivos propios	☐	☐	☐	☐	☐	El trabajo resulta más satisfactorio si responde a los objetivos del superior
PWD8	En el trabajo se debe tener igual consideración a la opinión de un superior que a la opinión de cualquier otro del equipo	☐	☐	☐	☐	☐	En el trabajo se debe tener más consideración a la opinión de un superior que a la opinión de cualquier otro del equipo
PWD9	Para asegurar que el trabajo se realiza lo mejor posible se debe dejar libertad	☐	☐	☐	☐	☐	Para asegurar que el trabajo se realiza lo mejor posible es recomendable que un superior muestre su autoridad y poder
PWD10	La relación de un superior con nosotros fuera de la empresa no tiene influencia en el trabajo	☐	☐	☐	☐	☐	La relación de un superior con nosotros fuera de la empresa puede influir negativamente en el trabajo

		1	2	3	4	5	
Incertidumbre (Piensa en tu entorno social y contesta)		Muy de acuerdo con la posición situada a la izquierda	De acuerdo con la posición situada a la izquierda	Muy de acuerdo con una posición intermedia entre ambos extremos	De acuerdo con la posición situada a la derecha	Muy de acuerdo con la posición situada a la derecha	
UNA1	La incertidumbre inherente de la vida es cada vez más aceptada y se afronta cada día tal como llega	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	La incertidumbre inherente de la vida es percibida como una amenaza continua que debe ser combatida
UNA2	Existe una aceptación al desacuerdo	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Existe una fuerte necesidad de consenso
UNA3	Hay mayor voluntad de tomar riesgos en la vida	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Hay una gran preocupación acerca de una vida segura
UNA4	Deben haber la menor cantidad de normas posibles	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Hay una necesidad de normas escritas y regulaciones
UNA5	Las creencias se basan en el sentido común y los generalistas	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Las creencias se basan en expertos y sus conocimientos
UNA6	No es importante conocer detalladamente la descripción y las instrucciones de mi puesto de trabajo para saber lo que se espera de mi	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Es importante conocer detalladamente la descripción y las instrucciones de mi puesto de trabajo para que sepa lo que se espera de mí
UNA7	Las reglas y normas no son muy importantes	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Las reglas y normas son importantes
UNA8	No se necesita reglas ni normas	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Se necesita reglas y normas para un correcto funcionamiento
UNA9	Antes de comenzar un trabajo o proyecto no se necesita saber cómo se hace tradicionalmente en la compañía	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Antes de comenzar un trabajo o proyecto se agradece saber cómo se hace tradicionalmente en la compañía

		1	2	3	4	5	
Individualismo (Piensa en tu entorno social y contesta)		Muy de acuerdo con la posición situada a la izquierda	De acuerdo con la posición situada a la izquierda	Muy de acuerdo con una posición intermedia entre ambos extremos	De acuerdo con la posición situada a la derecha	Muy de acuerdo con la posición situada a la derecha	
IND1	En la sociedad, las personas nacen en amplias familias o clanes que las protegen a cambio de lealtad	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	En la sociedad, cada uno tiene que hacerse cargo de si mismo/a y de su familia más cercana
IND2	Domina la consciencia del "nosotros"	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Domina la consciencia del "yo"
IND3	La identidad se basa en el sistema social	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	La identidad se basa en el individuo
IND4	Hay una dependencia emocional del individuo en organizaciones e instituciones	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Hay independencia emocional del individuo en organizaciones e instituciones
IND5	La implicación con las organizaciones es moral	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	La implicación con las organizaciones es racional, calculada
IND6	Priorizo las decisiones de equipo antes que mis decisiones individuales	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Priorizo mis decisiones individuales ante las de equipo
IND7	El éxito del equipo es más importante que la satisfacción de mis necesidades individuales	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	La satisfacción de mis necesidades individuales es más importante que el éxito del equipo
IND8	Prefiero seguir lo que hace el equipo del que formo parte antes que llevar a cabo mi propia iniciativa	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Prefiero seguir mi propia iniciativa antes que al equipo del que formo parte
IND9	Estoy convencido que el desarrollo de los objetivos del equipo es lo mejor para la empresa	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Estoy convencido que el desarrollo de mis objetivos personales por delante de los objetivos del equipo es lo mejor para la empresa
IND10	Priorizo el bienestar del equipo a mi recompensa individual	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Priorizo la recompensa individual frente al bienestar del equipo

	1	2	3	4	5	
Masculinidad (Piensa en tu entorno social y contesta)	Muy de acuerdo con la posición situada a la izquierda	De acuerdo con la posición situada a la izquierda	Muy de acuerdo con una posición intermedia entre ambos extremos	De acuerdo con la posición situada a la derecha	Muy de acuerdo con la posición situada a la derecha	
MAS1 La gente y el entorno son importantes	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	El dinero y lo material es lo importante
MAS2 La interdependencia es lo ideal	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	La independencia es lo ideal
MAS3 La labor proporciona la motivación	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	La ambición proporciona el impulso en la vida
MAS4 Uno simpatiza con los desafortunados	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Uno admira a los que han alcanzado el éxito
MAS5 Lo pequeño y lento es bonito	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Lo grande y rápido es bonito
MAS6 Lo unisex y lo andrógino son el ideal a perseguir	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Se aprecia la masculinidad ostentosa ('machismo')

A continuación cual es la situación real de tu trabajo según tu percepción personal:

	1	2	3	4	5
Soporte, interacción, comunicación y consulta	Totalmente en desacuerdo	En desacuerdo	Ni de acuerdo ni en desacuerdo	De acuerdo	Totalmente de acuerdo
SICC1 Mi superior me anima a aprender cosas nuevas	☐	☐	☐	☐	☐
SICC2 Mi superior consulta mi opinión antes de tomar decisiones frecuentemente	☐	☐	☐	☐	☐
SICC3 En mi grupo de trabajo, la gente acostumbra a compartir información con otros miembros del equipo	☐	☐	☐	☐	☐
SICC4 En el trabajo, siento la necesidad de compartir mi conocimiento con los demás	☐	☐	☐	☐	☐
SICC5 En mi organización, la gente suele compartir información	☐	☐	☐	☐	☐
SICC6 En mi organización, los superiores piensan que el tiempo usado para alcanzar decisiones colectivas está bien dedicado	☐	☐	☐	☐	☐
SICC7 El reconocimiento en mi organización proviene del compromiso con la cultura organizativa	☐	☐	☐	☐	☐

Orientación a la toma de riesgos	1 Totalmente en desacuerdo	2 En desacuerdo	3 Ni de acuerdo ni en desacuerdo	4 De acuerdo	5 Totalmente de acuerdo
RTO1 En mi organización se tolera el fallo de la gente que asume riesgos	☐	☐	☐	☐	☐
RTO2 En mi organización está bien vista la gente que asume riesgos	☐	☐	☐	☐	☐
RTO3 En mi organización hay mucho énfasis en hacer las cosas de forma novedosa	☐	☐	☐	☐	☐
RTO4 En mi organización se anima a la gente a asumir riesgos	☐	☐	☐	☐	☐

Ambiente	1 Totalmente en desacuerdo	2 En desacuerdo	3 Ni de acuerdo ni en desacuerdo	4 De acuerdo	5 Totalmente de acuerdo
ATM1 Disfruto tanto haciendo mi trabajo que me olvido de otras cosas	☐	☐	☐	☐	☐
ATM2 En mi trabajo me siento relajado	☐	☐	☐	☐	☐
ATM3 En mi trabajo existe una atmósfera de disfrute profesional	☐	☐	☐	☐	☐
ATM4 En mi trabajo existe una comunicación abierta	☐	☐	☐	☐	☐
ATM5 En mi organización existe una atmósfera de apoyo al desarrollo de habilidades	☐	☐	☐	☐	☐
ATM6 En mi organización, la gente está relajada en cuanto a posibles críticas constructivas sobre su trabajo	☐	☐	☐	☐	☐

Estructura, control y jerarquía	1 Totalmente en desacuerdo	2 En desacuerdo	3 Ni de acuerdo ni en desacuerdo	4 De acuerdo	5 Totalmente de acuerdo
SCH1 En mi entorno de trabajo es importante seguir las reglas y procedimientos	☐	☐	☐	☐	☐
SCH2 Mi supervisor siempre establece las instrucciones cuando me asigna un nuevo proyecto	☐	☐	☐	☐	☐
SCH3 En mi entorno de trabajo, el poder está en manos de unos pocos	☐	☐	☐	☐	☐
SCH4 Mi entorno de trabajo está estructurado con todas las actividades y proyectos planificados cuidadosamente	☐	☐	☐	☐	☐
SCH5 En mi entorno de trabajo los niveles jerárquicos son claros	☐	☐	☐	☐	☐
SCH6 Los procesos y estructuras son muy formales en mi organización	☐	☐	☐	☐	☐

Finalmente, refleja a continuación qué valores y actitudes son importantes para ti:

Auto-dirección		1 Totalmente en desacuerdo	2 En desacuerdo	3 Ni de acuerdo ni en desacuerdo	4 De acuerdo	5 Totalmente de acuerdo
SDI1	Para mí es importante ser fiel a mis ideas	☐	☐	☐	☐	☐
SDI2	Para mí es importante tomar mis propias decisiones acerca de lo que hago	☐	☐	☐	☐	☐
SDI3	Me intereso por cosas más allá de lo que dicta mi organización	☐	☐	☐	☐	☐
SDI4	Para mí es importante ser independiente	☐	☐	☐	☐	☐

Estímulo		1 Totalmente en desacuerdo	2 En desacuerdo	3 Ni de acuerdo ni en desacuerdo	4 De acuerdo	5 Totalmente de acuerdo
STI1	Pienso que es importante hacer cosas nuevas en la vida	☐	☐	☐	☐	☐
STI2	Siempre ando en busca de nuevos retos, aunque impliquen algún riesgo	☐	☐	☐	☐	☐
STI3	Me gustan las sorpresas, teniendo una vida emocionante	☐	☐	☐	☐	☐

Logro		1 Totalmente en desacuerdo	2 En desacuerdo	3 Ni de acuerdo ni en desacuerdo	4 De acuerdo	5 Totalmente de acuerdo
ACH1	Es importante para mí mostrar mis habilidades	☐	☐	☐	☐	☐
ACH2	Es importante para mí ser una persona muy exitosa	☐	☐	☐	☐	☐
ACH3	Es importante para mí ser ambicioso y mostrar que soy capaz de conseguirlo	☐	☐	☐	☐	☐
ACH4	Progresar en la vida es importante para mí, esforzándome en ser mejor que otros	☐	☐	☐	☐	☐

Poder		1 Totalmente en desacuerdo	2 En desacuerdo	3 Ni de acuerdo ni en desacuerdo	4 De acuerdo	5 Totalmente de acuerdo
PWR1	Para mí es importante tener poder sobre los demás	☐	☐	☐	☐	☐
PWR2	Para mí es importante mandar y decir a los demás lo que tienen que hacer	☐	☐	☐	☐	☐
PWR3	Para mí es importante ser el que toma las decisiones	☐	☐	☐	☐	☐
PWR4	Para mí es importante ser rico	☐	☐	☐	☐	☐

Conformidad		1 Totalmente en desacuerdo	2 En desacuerdo	3 Ni de acuerdo ni en desacuerdo	4 De acuerdo	5 Totalmente de acuerdo
CON1	Para mí, es importante comportarme de manera aceptable para la gente	☐	☐	☐	☐	☐
CON2	Creo que debo respetar a mis padres y a las personas mayores siendo obediente	☐	☐	☐	☐	☐
CON3	Es importante para mí ser amable con todo el mundo	☐	☐	☐	☐	☐

APPENDIX 3: Descriptive Statistics

	Range	Minimum	Maximum	Mean	S.d.	Skewness*	Kurtosis**
Manager age	17	37	54	46,99	5,415	-0,080	-1,282
Manager gender	1	0	1	0,87	0,339	-2,200	2,869
Employee age	43	21	64	41,14	10,475	0,253	-0,718
Employee gender	1	0	1	,67	0,473	-0,713	-1,508
Employee education	5	1	6	4,07	1,155	-0,219	1,143
ECManager	2,89	1,33	4,22	2,7306	0,80538	0,018	-1,203
EC	3,00	1,67	4,67	2,9112	0,67945	0,076	-0,891
Power Distance	2,60	1,70	4,30	3,4258	0,66630	-1,055	-0,305
Uncertainty Avoidance	2,00	3,00	5,00	4,1326	0,50734	-0,157	-0,595
Collectivism	3,17	1,33	4,50	2,4891	0,62925	1,118	1,684
Masculinity	2,67	1,67	4,33	2,8687	0,70960	0,425	-0,950
Supportive Communication	2,57	1,71	4,29	3,2136	0,81536	-0,214	-1,535
Organizational control&struct.	3,25	1,75	5,00	4,2045	0,53597	-1,244	4,288
Self-Direction	3,25	1,75	5,00	3,7247	0,79417	-0,700	0,121
Stimulation	3,67	1,33	5,00	3,7626	0,78285	-0,774	0,245
Achievement	3,00	2,00	5,00	3,6136	0,71759	-0,496	-0,274
Power	3,00	1,00	4,00	2,2222	0,60548	0,131	0,032
Conformity	3,50	1,50	5,00	3,0354	1,02569	0,488	-,927
Risk taking/Atmosphere	2,60	1,80	4,40	3,1404	0,74260	-0,292	-1,581

APPENDIX 4: Pearson Bivariate Correlations

Correlations

	Manager age	Manager gender	Employee age	Employee gender	Employee education	EC Manager	EC	Power Distance	Uncertainty Avoidance	Collectivism	Masculinity	Supportive Communication	Control and Structure	Self-Direction	Stimulation	Achievement	Power	Conformity	Risk Orientation/Atmosphere
Manager age																			
Manager gender	,511**																		
Employee age	,041	,044																	
Employee gender	-,065	,106**	,186**																
Employee education	-,034	-,080	,142*	-,124*															
EC Manager	,095	,085	,007	,224**	,130*														
EC	,019	,030	-,126	,213**	-,052	,691**													
Power Distance	,012	,008	,222**	,190**	,056	,391**	,437**												
Uncertainty Avoidance	,119**	,013	,083	-,238**	,172**	,209**	,215**	,092											
Collectivism	,291**	-,035	-,368**	-,285**	-,027	,063	,063	-,220**	,215**										
Masculinity	,101*	-,030	-,364**	-,260**	,091	-,065	-,127*	-,257**	,170**	,507**									
Supportive Communication	,230**	,050	-,041	,013	,162**	,512**	,481**	,318**	,214**	,251**	,236**								
Control and Structure	,275**	,065	,085	-,326**	,069	-,097	-,079	-,064	,370**	,274**	-,076	,006							
Self-Direction	,217**	,115	-,456**	,021	-,171**	,508**	,481**	,058	,117	,352**	,134	,341**	,088						
Stimulation	,209**	,061	-,398**	,105	-,221**	,397**	,455**	,129	,027	,229**	,095	,264**	-,070	,790**					
Achievement	,117	,057	-,404**	,112*	-,201**	,341**	,382**	,003	,016	,260**	,166*	,155*	-,019	,671**	,777**				
Power	-,140**	-,179**	-,003	,030	-,066	-,152*	-,036	,022	-,175**	-,034	,092	-,053	-,094	-,057	,033	,067			
Conformity	-,166**	-,089	,245**	-,269**	,148*	-,588**	-,549**	-,324**	,073	-,178**	-,113	-,425**	,212**	-,510**	-,513**	-,419**	,012		
Risk Orientation/Atmosphere	,214**	,041	-,233**	,193**	-,069	,653**	,607**	,323**	,032	,284**	,067	,527**	-,121	,600**	,579**	,485**	-,027	-,815**	

**. Significant correlation at level 0.01 (bilateral).

*. Significant correlation at level 0.05 (bilateral).

Aquesta Tesi Doctoral ha estat defensada el dia ____ d_____ de 201__

al Centre_____

de la Universitat Ramon Llull, davant el Tribunal format pels Doctors i Doctores

sotasignants, havent obtingut la qualificació:

President/a

_____

Vocal

_____

Vocal *

_____

Vocal *

_____

Secretari/ària

_____

Doctorand/a

(*): Només en el cas de tenir un tribunal de 5 membres