

Exploring motivational value preferences among different occupations in Portugal

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Abstract

Motivational policy at workplace is keeping catching attention. And there are many different theories support this attention and try to explain the importance of motivation with different focus. Also numerous theories also speculate the structure of motivation with various considerations. Schwartz theory could be one of the mature structured theories of motivation, which divides values into ten types. However, when implement those theories into the workplace; it may not seem same efficient for different occupations, since people of different occupations are quite different. They exposed to different working environment and different educated colleagues and networks, and this difference may extend to their daily life. With this consideration, I try to figure out the occupational preference towards ten value types by Schwartz. And the occupation groups are divided into ten groups by ISCO-08. According to the database provided by Euro Social Survey, we get the exploring results that the difference of occupations towards motivational values do existed, which suggest differentiated policy of motivation should be take into consideration when organization want to have a better result of motivation. Furthermore, we can recognize this specific orientation towards values in one specific occupational group as occupational characteristics. From this view, the scope of occupational characteristics could be extended to value preference rather than just focus on the job responsibilities and description. In a more specific way, this study also suggests an idea of sensitive indictor. Since majority of occupations groups are significantly statistic difference in their evaluation of values at self-direction and tradition, those two could be the sensitive indictors to view and judge occupational difference towards value preference.

Overall, I suggest this study could be the exploring research of occupational difference towards value preference and raise attention to take occupational factor into account when implement motivational policy in work place.

Key words: work motivation, occupations, ISCO-08, value preference, Schwartz theory

Resumo

A motivação política no trabalho é para manter a atenção. E há muitas teorias diferentes que apoiam esta atenção e tentam explicar a importância da motivação com focos diferentes. Também, numerosas teorias especulam a estrutura de motivação com várias considerações. A Schwartz teoria pode ser uma das teorias adultas estruturadas de motivação, que divide os valores em dez tipos. Mas, quando aplicar essas teorias para o local de trabalho: pode não parecer a mesma eficiência para diferentes ocupações, porque pessoas de diferentes profissões são completamente diferentes. Eles estão expostos a ambientes diferentes de trabalho com diferentes cultos colegas e redes, e esta diferença pode prolongar a sua vida quotidiana. Com essa consideração, eu tento descobrir a preferência profissional para dez tipos de valor por Schwartz. E os grupos de ocupação estão divididos em dez grupos por ISCO - 08. De acordo com a base de dados fornecidos pela Euro Social Survey, vamos explorar os resultados que a diferença de ocupações para valores motivacionais existe, que sugerir a política diferenciada de motivação deve ser levado em consideração, quando a organização quer ter um melhor resultado de motivação. Além disso, podemos reconhecer esta orientação específica para um determinado grupo profissional como os valores de características profissionais. A partir deste ponto de vista, o âmbito das características profissionais pode ser prorrogado para o valor de preferência mais do que concentre-se a responsabilidade e descrição de trabalho. De maneira mais específica, este estudo também sugere uma ideia do indicador sensível. Porque a maioria das ocupações de grupos são significativamente diferente estatística na avaliação de valores a auto-direção e tradição, os dois podem ser os indicadores sensíveis à vista e o julgar as ocupações diferentes para o valor de preferência.

Em geral, sugiro que este estudo pode ser a diferença para explorar pesquisas profissionais de preferência de valor e chamar a atenção para levar a fator ocupacional em consideração, quando implementar política motivacional no local de trabalho.

Palavras de chave: Motivação para o trabalho, Ocupações, ISCO-08, Valor de preferência, A teoria de Schwartz

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Chapter 1: Introduction

1.1. Research focus

Occupation represents a group of individuals who are exposed to certain environment and own certain social status. However, it covers more than aspects of work and expands to every daily life, such as education, leisure activities and social network. Those similarities within occupational groups can lead to certain similar property, such as the way of thinking and personal preference. Neil and Roccas (2005) found that economics attribute more importance to self-enhancement values and less importance to universalism values than other people. When comes to the preference of organizational culture, Catherine and Cheryl (2004) figured out the various preference among occupations. Results from those studies can be treated as evidences to prove that occupational groups do have some characteristics in common. Therefore, I postulate that occupational group as a set of people with certain similar properties could be the brace for this thesis. In this dissertation, the occupational characteristics are connected to preference of motivational values, such as plant operators show their preference to traditional values, when managers show their preferences to simulated value. There are two main theories supports my study. The first one is Schwartz theory about human value, and the second one is ISCO-08 (International standards classifications of occupations 2008), which divides occupations into 10 types.

This dissertation, which reposed on occupational characteristics, focuses on motivational value preferences among different occupations. Since Schwartz theory, which studied motivational value in a circular structure, gaining evidence from samples of 67 nations (Schwartz, 1992, 2005; Schwartz & Sagiv, 1995), as well as from recent data from 38 countries (Fontaine, Poortinga, Delbeke, & Schwartz, 2008), will be a main tool to explore the topic of this dissertation. In Schwartz theory, values are divided into 10 types and correlations among them are viewed as congruent and conflicts. If the hypothesis that occupational groups tend to be classified with one or more values, when compared with the whole population in Portugal, is supported, it will be an

interested topic to implement more researches in order to use those correlations for better management by groups.

1.2. Structure of the study

With an attempt to expose the problem, the results and the consequent discussion in an accurate way, the present dissertation will comprise the following sections: **Objectives** –we are going to explain our achieved study aims, namely, explain in details that the corresponding characteristics of different occupational groups, when compared with the populations ; **Literature review**– we are going to explore the theoretical model of value as well as occupational characteristic, additionally, previous researches can offer some resources about value priority, which may be useful to understand the occupational value priority. **Methodology** – database introduction, sample information, measurement instruments, computing method and variables can be found in this section; **Analysis and Results** – we are going to study the outcomes of my study, exploring a descriptive analysis and testing the hypothesis; **Discussion** – we are going to discuss the results previously described, embracing it in my thesis objectives and previous findings, answering the research question; also we give some insights about the major contributions of the present study, alerting by their limitations and suggesting some points for further research. **Conclusion** – we are going to state the results get by the data analysis and summarized the whole dissertation.

Chapter 2: Literature review

2.1 Occupational characteristics

Kielhofner & Burke (1985:12) give the definition of occupation as "The images people have of themselves as occupying certain social positions". And Casey (1995: 28) raises the following manner about occupation: "IN modern society, people have defined themselves, and in turn been socially defined, by the type of work that they do in the public sphere. Work that is socially determined and usually paid for in the form of a wage or salary has been a primary factor in

socialization, in social cohesion and personal identity formation in modern societies.” In the workplace, where participants may stay more than eight hours in the weekdays, there is no doubt that their ideas, behaviors and thoughts are affected by colleagues, supervisors and subordinates. Even though, out of office hours, they cannot totally get rid of occupational effects, such as friends in the same social network, social status and salary will keep making a sound to daily life. In some extent, participants are socialized by present culture of the work place and may come to identify themselves with its effects; and those may induce to the similar characteristic possessed by specific occupational group.

And importantly, before being socialized by job, other factors also lead to those professional characteristics. Individual personality traits can be treated as one factor (Costa et al., 1984; Rosse et al., 1991; Gottfredson et al., 1993). Some occupations seem more attractive to particular personalities. Individuals who adore power, wealth and authority may found that manager position seems more attractive than technician for their future job and therefor, they may choose business administration as a major when they enter the university. The business knowledge and innovative environment in the commercial college in turn will strength similarities among those students. It can be treated as a previous period before being socialized by job. Other factors, such as Socio-economic background, also show their effects. Chapman (1981) found that Job choice is influenced by social-economic class of parents. Hence, elements affect occupational choice and conversely occupational properties induce workers to perform similarity.

When dividing occupations, the required skills to finish relative assignments could be treated as standards, such as, a professional should have complex problem-solving, decision-making and creativity skills to satisfy the requirement of this occupation. The International Standard Classification of Occupations 2008 (ISCO08) divided occupation into 10 major groups and corresponding minor groups by the correspondingly required skills. Table 1 displays the major groups and its definition as following:

Table 1 : Occupations -- the major groups

Occupation
Manager: Plan, direct, coordinate and evaluate the overall activities of enterprises, governments and other organizations or of organizational units within them and formulate and review policies, laws, rules and regulations
Professionals: Increase the existing stock of knowledge, apply scientific or artistic concepts and theories, teach about the foregoing in a systematic manner, or engage in any combination of these activities
Technicians and associated professionals: Perform technical and related tasks connected with research and the application of scientific or artistic concept and operational methods, and government or business regulations
Clerical support workers: Record, organize, store, compute and retrieve information, and perform a number of clerical duties in connection with money-handling operations, travel arrangements, requests for information, and appointment.
Services and sales workers: Provide personal and protective services related to travel, house-keeping, catering, personal care, protection against fire and unlawful acts; or demonstrate and sell goods in wholesale or retail shop and similar establishments, as well as at stalls and on market
Skilled agricultural, forestry and fishery workers: Grow and harvest field or tree and shrub crops, gather wild fruits and plants, breed, tend or hunt animals, produce a variety of animal husbandry products, cultivate, conserve and exploit forests, breed or catch fish and cultivate or gather other forms of aquatic life in order to provide food, shelter and income for themselves and their households.
Craft and related trade worker: Apply their specific knowledge and skills to produce or process goods. The tasks call for an understanding of all stages of the production process, the materials and tools used and the nature and purpose of the final product.
Plant and machine operators and assembles: Operate and monitor industrial and agricultural machinery and equipment on the spot or by remote control, drive and operate trains, motor vehicles and mobile machinery and equipment, or assemble products from component parts according to strict specifications and procedures.
Elementary occupations: Consist mainly of simple and routine tasks which mainly

require the use of hand-held tools and often some physical effort.
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Armed-force occupations: Include all jobs held by members of the armed forces.

2.2 The importance of value

2.2.1 Values and behavior

Before implement certain behaviors, people will make an evaluation by competing values. All intentional behavior has positive implications for expressing, upholding, or attaining some values but negative implications for adverse values (Schwartz, 2006), such as pursuing authority is positive with power and negative with universalism.

There are several possible processes that might link value priorities to people's attitudes and behaviors (Schwartz, 1996). First of all, as human nature, our notice and attention to the world around us are affected by values. Values which we give more importance are easily to be roused, and vice versa (Bardi, 2000). Only after being active and awarded, values can be expressed in the action. The second step in the activation of values is awareness of possible actions that can release need. However, this step may be not affected by values. The third step in the activation of values is perceived that your own abilities are capable for making useful actions. The final steps are defining the situation and reacting to the situation, which according to the weighting between pros and cons. In the last two steps, our perceptions and interpretations of methods and reactions were based on values.

Why do people behave according to their values? Rokeach (1973) give possible reasons to the need for consistency between one's beliefs (values) and actions. Other hypothesis is that actions derived from values can help people get what they want and the mutually facilitated affects between want and behavior strength the possibilities. Feather (1995) and Sagiv & Schwartz (1995) support that people want to act according to their values. Since values are motivational resources, actions which facilitate the expression of values seem more attractive, and more valued

subjectively. People who value benevolence are more likely to be attracted by a service and people-oriented job, such as teacher, whereas those who value stimulation or power might find the same offer demotivated and unattractive.

The natural way to pursue important values is to behave in ways that express them or promote their attainment. People pursue power values by seeking for higher position in jobs and create fortune, and pursue traditional values by complying with the traditional activities and respect elder people. However, sometimes, some actions can be expressed by several values. For example, people enjoy exciting games because they like adventure (stimulation value) and pressure themselves (hedonism value) by curiosity.

2.2.2 Value and motivation

The importance of the values, the magnitude of the anticipated impacts of the action and the forthcoming affect towards other values serve as the resultant influence to motivation.

Once people recognize feasible actions to the setting goal, their values provide motivation to act and then trigger possible actions (Feather, 1995). High-priority values are central to the self-concept. When coming to the evaluation of pros and cons, more important values have a louder voice than the less important one. The more important a value is, the more likely it will be expressed in behavior. When considering values' expression, it is more focused on the pros of desired actions rather than the cons. The pros enhance the confidence to reach valued goal and increase the persistence when facing with puzzle and difficulties.

By evaluating the implications of specific actions, people weight the material, social, moral, and other psychological costs and benefits of these potential behaviors. If the evaluation is easy to get a competing outcome, the action or inactions will follow quickly. However, if there are not strong advantages and disadvantages after comparing, the decision will be delayed and actions may be taken to reduce this conflict. Usually, this assessment often occurs quickly and outside conscious awareness.

Events may activate one value, but it is also possible to activate the adverse values. When evaluating the happen chance of behaviors, we should consider both supportive and appositive values. Failure to consider opposing values can lead to underestimate the influence of values on behavior. Schwartz (1996) found that high priority for simulative values and low priority for appositive values can form an intensive motivation

2.2.3 The importance of value in workplace

There is growing awareness of researchers on examining the relation among individual values, attitudes and behaviors of employees in the workplace. Value can be treated as beliefs, referring to desirable goals and predicting behaviors by its nature. How about its role in the workplace? Many scientists point out that values play a functional role as predictors or moderators of work-related processes and outcomes, including organizational commitment as well as job satisfaction and work performance (Finegan, 2000; Glazer, Daniel, & Short, 2004; Kirkman & Shapiro, 2001). Further, the fit between individual and organizational values is a core factor to explain those impacts. An extensive literature review finds Schwartz's model to be an appropriate comprehensive framework for studying supplementary person-organization value fit (De Clercq, Fontaine, & Anseel, 2008). Herbst and Houmanfar (2009) found that employees with more person-organization congruence of values may show greater flexibility across jobs and mesh better with their organization. The explanations of those viewpoints focus on the influence of congruent and conflicts of values between individual and organization. When people values are admired and supported by the organization, they tend to be more motivated, happier and satisfied with work and then trigger high performance and efficiency (Berings, De Fruyt, & Bouwen, 2004). Conversely, when the values are conflict with the working group or environment, confusion, depression or despair will occur and stop them to get good results in jobs.

Several studies have applied Schwartz's (1992, 1996) human values theory to examine the relationships with commitments. Glazer et al. (2004) use Schwartz's Values Survey (SVS) to examine the relationship between values and affective continuance organizational commitment among hospital nurses in four countries. Negative relationship between openness to change and

affective commitment in three of the four countries, and between conservation values and continuance commitment in the Italian sample were founded. Fischer and Smith (2006) found no direct effect on affective organizational commitment for either conservation or openness to change in a survey of German and British employees. Future research should be implemented to explore the relationship between the forms of commitments and values. Even though there are no consistent findings among values and commitments, the discovered results will add to our understanding how individual values affect commitment in the workplace and contribute to our understanding of how to create a better fit between individual and organization.

2.3 Values theory

The definitions of value can be various, but the nature of values is identical with slight difference. Most social scientists view values as deeply rooted, abstract motivations that guide, justify or explain attitudes, norms, opinions and actions (Rokeach, 1973). Since this dissertation is based on the Schwartz' theory and he has commented on the definition of value as follows: Value affect laden beliefs that refer to a person's desirable goals and guide the selection or evaluation of actions, policies, people and events. Namely, values can be expressed as "motivational goals." The questionnaire I used in this dissertation is Portrait value questionnaire (PVQ), which contains 21 items. Those items operationalize Schwartz's definition by describing the target person as one who is motivated to attain particular broad goals. Therefore, values are defined as desirable, trans-situational goals, varying in importance, that serve as guiding principles in people's lives (Schwartz, 1992; Rokeach, 1973, and Kluckhohn, 1951).

2.3.1 The Theoretical model

According to Schwarz's theory, values are divided into ten basic types. Table 2 gives specific explanations of each value type and its corresponding definitions, sources and specific representatives. The divided rules of values are three universal requirements :(1) needs of individual as biological organisms (abbreviated as "organism"); (2) requisites of coordinated social interaction (abbreviated as "interaction"); and, (3) requirements for the smooth functioning

and survival of groups (abbreviated as “group”) (Schwartz, 1994: 21). Different values are originated from one or more sources according to their properties.

Table 2: Ten Basic Value types

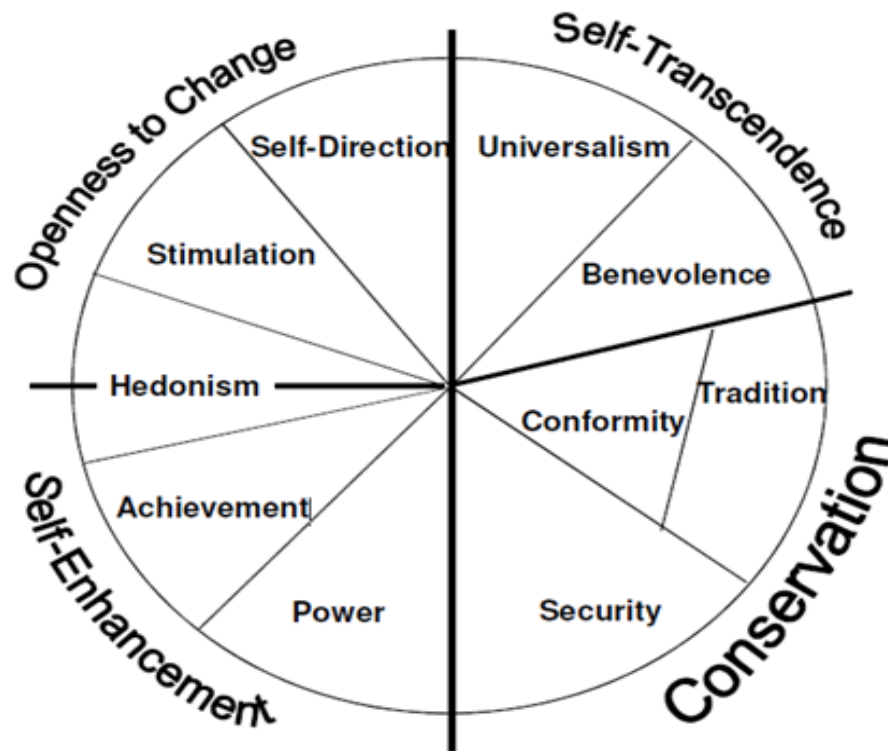
Value types and definitions	Source	Representatives
Benevolence: Preservation and enhancement of the welfare of people with whom one is in frequent personal contact.	Organism Interaction Group	helpful, honest, forgiving, loyal, responsible
Universalism: Understanding, appreciation, tolerance and protection	Organism Group	broadminded, wisdom, social justice, equality, a world at peace, a world of beauty, unity with nature, protecting the environment
Self-direction: Independent thought and action-choosing, creating, exploring.	Organism Interaction	creativity, freedom, independent, curious, choosing own goals
Stimulation: Excitement, novelty and challenge in life	Organism	daring, a varied life, an exciting life
Hedonism: Pleasure and sensuous gratification for oneself.	Organism	pleasure, enjoying life
Achievement: Personal success through demonstrating competence according to social standards.	Interaction Group	successful, capable, ambitious, influential
Power: Social status and prestige, control or dominance over people and resources	Interaction Group	social power, authority, wealth
Security: Safety, harmony and stability of society, of relationships and of self.	Organism Interaction Group	family security, national security, social order, clean, reciprocation of favors
Conformity: Restraint of actions, inclinations and impulses likely to upset or harm others and violate social expectations or norms.	Interaction Group	politeness, obedient, self-discipline, honoring parents and elders
Tradition: Respect, commitment and acceptance of the customs and ideas that traditional culture or religion provide.	Group	humble, accepting my portion in life, devout, respect for tradition, moderate

Those ten values are not independent; there are dynamic relations among them. And the Theory of Value Contents and Structure explained by Schwartz (Schwartz, 1992) make a clear explication. The single value can be classified in a circular structure, where the closer the values are in either direction around the circle, the more positive the relationship between them; the more distant they are; the more negative their interrelationship (Schwartz, 1994; 2007). Figure 1 shows the circular structure which portrays the total pattern of relations of conflict and congruity among values. Actions in pursuit of any value have consequences that conflict with some values but are congruent with others. For example, pursuing power values typically conflicts with pursuing conformity values. Seeking dominance for self (self-direction) usually conflicts with humble and moderate (tradition value). But pursuing both power and self-direction values seems probable, as they are congruent with each other. Creative characteristic in some extent can provide people with more chance to pursuing wealth.

As its demonstration, tradition and conformity share one triangle wedge because of their broad motivational goal (conservation). Comparing with the conformity, tradition value seems more abstract and absolute, and lack interaction-based. Those reasons make the situation that conformity has more conflict with apposite hedonism and tradition has less conflict with hedonism. Therefore, conformity is more toward the center and tradition is stay in margin place.

Viewing values organized along two bipolar dimensions help us understand the relationships between values. For higher level analysis, shown in the figure 1, one dimension is the conflicts between 'openness to change' and 'conservation' values. This dimension focus on the contradiction between values that emphasize independence of thought, action, and feelings and readiness for change (self-direction, stimulation) and values that emphasize order, self-restriction, preservation of the past, and resistance to change (security, conformity, tradition). The second dimension contrasts 'self-enhancement' and 'self-transcendence' values. This dimension signify the difference between values that emphasize concern for the welfare and interests of others (universalism, benevolence) and values that emphasize pursuit of one's own interests and relative success and dominance over others (power, achievement). Hedonism shares elements of both openness to change and self-enhancement.

Figure 1: Theoretical model of relations among the ten motivational values



This theory leads to a universal principle behind numerous values and organizes a reasonable system for analyzing the meaning of motivational value. It is common that people will have different choice facing the numerous questions and attribute to different preference of motivational value, but the same structure of motivational oppositions and compatibilities apparently organize their values.

2.3.2 Roots of the Dynamic Structure of Value Relations

According to Schwartz (2006), we can have a better classification of the roots of these ten values. Values in the top panel of Figure 2 (power, achievement, hedonism, stimulation, and self-direction) are related with individuals' expression of their own interest and characteristic (personal focus). Values in the bottom panel (benevolence, universalism, tradition, conformity, and security) are related with individuals' expression of socially relations to others and their

interest (social focus). Schwartz, Sagiv, & Boehnke (2000) support this interpretation of relative value priorities to worry about societal problem (macro-worries). In this research, universalistic values show the strongest correlations with macro-worries; the other social focused values were all positive related and significant as well. In contrast, power values have the most negative correlations with macro-worries, and all the other personal-focused values were also negatively related and significant as well.

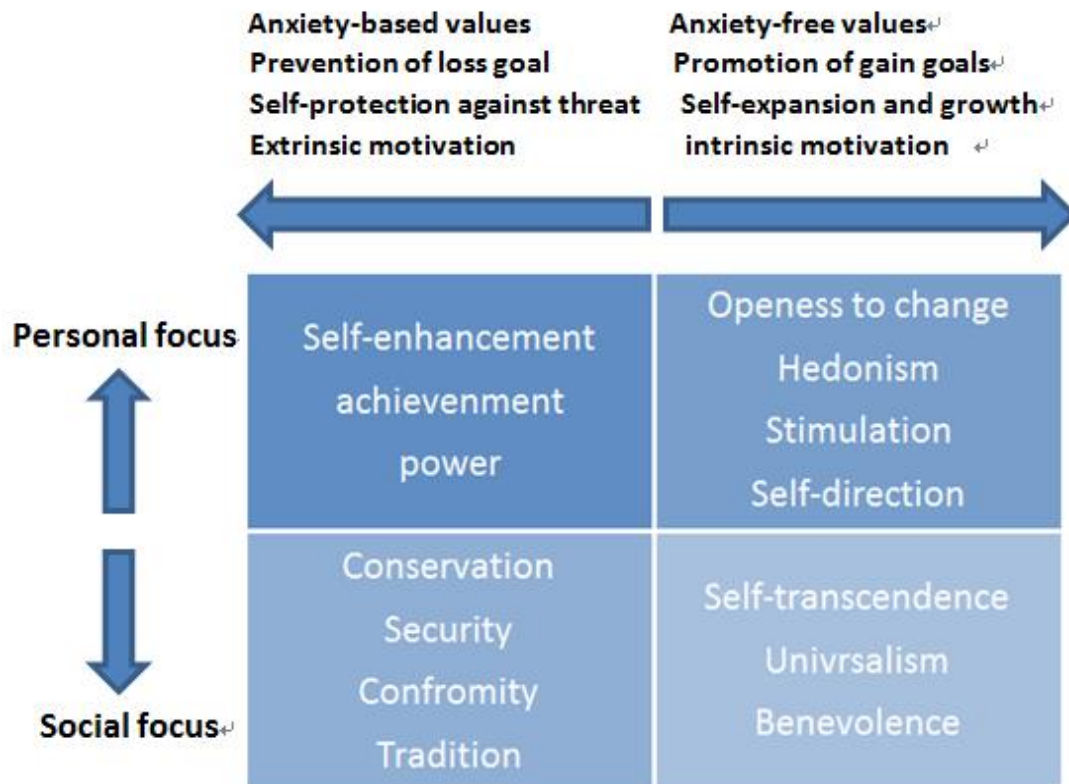
The relation of values to anxiety is another organizing principle of this theory. Values on the left in Figure 2 are related to anxiety due to uncertainty in the social and physical world. They are self-protective values. People seek to avoid conflict (conformity) and to maintain the current order (tradition, security) or actively to control threat (power). Values on the right (hedonism, stimulation, self-direction, universalism, and benevolence) related to anxiety-free motivations. They are self-promotion values. For Achievement values, as its control over threat or maintenance of successful social status (control anxiety) and its strong abilities to cope with anxiety and meanwhile social reaction of control anxiety, it represents both. Therefore, conservation and self-enhancement values reflect greater personal anxiety than self-transcendence and openness values. Security and power values display the most negative relation, while hedonism and either benevolence or self-direction values display the most positive relation. Interpreting values in interests and anxiety insights can facilitate predicting and understanding relations of values to various attitudes and behaviors.

How people think about other individuals in the society can be seen as other perspectives to make an interpretation about the roots. Higher priority in self-protection values reflects mistrust and nonsupport among people; power and security relate most negatively with trust and support. Higher priority in self-promotion value reflects trust and support among people; universalism and benevolence values correlated most positively with believing that most people are trustworthy, fair, and helpful.

Finally, values on the left serve as extrinsic motivations. Having these values depends on achieving social agreement and material incentive (self-enhancement), or meeting the expectations of others and avoiding the sanctions they may impose (conformity, tradition), or on

receiving protection and care (security). Values on the right serve as intrinsic motivations: behavior based on these values is rewarding in itself, providing satisfaction or pleasure through expressing autonomy and competence (openness) or helping other people and contribution (self-transcendence).

Figure 2 Roots of the Dynamic Structure of Value Relations



2.4 Previous research about value priority and its Sources

2.4.1 A Pan-Cultural Baseline of Value Priorities

Despite the undoubted differences about importance given to the ten values among people, a similar hierarchical order can be found among different societies or cultures. Research shows that 10 motivationally distinct value types are recognized across cultures and are used to express

value priorities, provide substantial support for both the content and structure postulates of the theory (Clercq, 2008). An extensive quantitative literature review allow the conclusion that this model offers a thorough, comprehensive, and cross-culturally validated theoretical values structure. Across representative samples, using different instruments, the importance ranks for the ten values are quite similar. The main reason probably derives from the adaptive functions of values in maintaining societies and from our common human nature (Campbell, 1975; Parsons, 1951; Schwartz & Bardi, 1997). Socializers and social control agents discourage values that clash with the smooth functioning of significant groups or the larger society. Values that clash with human nature are unlikely to be important. The basic social function of values is to motivate and control the behavior of group members (Parsons, 1951). Two mechanisms are critical. First, values serve as internalized guides for individuals; they relieve the group has the necessity for constant social control. Second, people invoke values to define particular behaviors as socially appropriate, to justify their demands on others, and to elicit desired behaviors. Socializers seek, consciously or not, to instill values that promote group survival and prosperity. To explain the pan-cultural value hierarchy, we must explain why particular values are viewed as more or less desirable across societies (Schwartz and Bardi, 2001).

Three demands of human nature and requirements of societal functioning are especially relevant: (1) Most important is to promote and preserve cooperative and supportive relations among primary group members. The critical focus of value transmission is to develop commitment to positive relations, identification with the group, and loyalty to its members. (2) Individuals must be motivated to invest time and effort to perform productive work, to solve problems that arise when working, and to generate new ideas and technical solutions. (3) It is important to legitimize gratification of self-oriented needs and desires as long as this does not undermine group goals. Rejecting all such gratification would frustrate individuals and lead them to withhold their energies from the group and its tasks. Table 3 presents the ranks of those ten values and reasons that contribute to those ranks.

Table3: The rank of ten motivational values

Items	Rank	Contribution
Benevolence	1	Benevolence values (helpfulness, honesty, forgiveness, loyalty, responsibility) provide the internalized motivational base for

		cooperative and supportive social relations.
Universalism	2/3	Contribute to positive social relations, but threaten in-group solidarity during times of intergroup conflict.
Self-direction	3/2	Strong implications for meeting the functional requirement of motivating individuals to work productively; satisfy self-oriented needs and desires without harming others.
Security	4 /5	Promote harmonious social relations; conflicts with gratifying
Conformity	5/6	self-oriented needs and desires; conflicts with innovation
Achievement	6 /4	Motivating people to work for the group, gratifying self-oriented desires, and may cause disruption of social relations among group members.
Hedonism	7	Irrelevance for the first two requirements that underlie value
Stimulation	8/9	importance. They are relevant to the third requirement, however. Hedonism and stimulation values are social transformations of the needs of the individual, as a biological organism, for physical gratification and optimal arousal (Schwartz, 1992).
Tradition	9/8	Tradition values more relative with the abstract beliefs and symbols that represent groups, and find less expression in the daily social behavior.
Power	10	Power values emphasize dominance over people and resources. Their pursuit often entails harming or exploiting others, thereby disrupting and damaging social relations.

This pan-cultural normative baseline is very important when make comparison in a country level and within groups. In this dissertation, when analyzing and comparing the occupational ratings and rankings of values' importance, this baseline should be considered in order to have rigorous results.

2.4.2 Sources of Value Priorities

Based on the previous researches, there are several known sources for the values preferences. People's age, education, gender, and other characteristics play an important role in influencing the values preferences.

- Age

As people grow older, they tend to become more afraid of loneliness and tend to be embedded in social networks, and have less wellness changes and challenges (Glen, 1974; Tyler & Shuller, 1991). This similar property of older people gives rise to the hypotheses that age correlates most positively with conservation values (tradition, conformity, security) and negatively with openness to change values (self-direction, stimulation) and with hedonism. Once individuals form a family of procreation and attain stable positions in the occupational world, they tend to become less preoccupied with their own strivings and more concerned with the welfare of others (Veroff, Reuman, & Feld, 1984). This leads to the hypotheses that age correlates positively with self-transcendence values (benevolence, universalism) and negatively with self-enhancement values (power, achievement).

It is common to speak of three systematic sources of value change in adulthood: historical events that impact on specific age cohorts (e.g., war, depression), physical ageing (e.g., loss of strength or memory), and life stage (e.g., child rearing, widowhood). Compare to the group suffering from the economic and physical insecurity, the lucky ones will give less importance to the materialistic. People form values in adolescence that change little thereafter. The more economic and physical insecurity the adolescents experience, the more important materialist values are to them throughout their lives. Among the young generations, they give lower priority to materialism attributed to the increasing prosperity and security many nations have enjoyed during most of the past 50 years. These increases have reduced existential threats and dependence on extended primary groups for subsistence. They have increased individuals' opportunities to indulge themselves, to be more adventuresome, and to choose their own way. These changes imply that younger groups will give greater priority to hedonism, stimulation, self-direction, and, possibly, to universalism values, but less priority to security, tradition, and conformity values. Inglehart

(1997) demonstrated that older persons in much of the world give higher priority to materialism than younger people. Along with age, the degeneration of strength, energy, cognitive speed, memory, and sharpness of the senses may force people to value more security, stimulation, conformity and tradition, and value less hedonism, achievement and power. For different period of adulthood, value priority still shows its difference. In the early adulthood, people want to prove their ability and show their achievement in society, so they tend to sacrifice security, conformity, and tradition to perusing achievement and stimulation. In middle adulthood, people invest in establishing family, work, and social relations that they are committed to preserve. Most of people approach the highest level of achievement in their life, and work and family responsibilities constrain risk-taking and opportunities for change. Such life circumstances are conducive to more emphasis on security, conformity, and tradition values and less on stimulation and achievement values. The constraints and opportunities of the pre-retirement life stage reinforce these trends. With retirement and widowhood, opportunities to express achievement, power, stimulation, and hedonism values decrease further. In contrast, the importance of security and the investment in traditional ways of doing things make security and tradition values more important.

- Gender

Psychoanalytic theories contend that women are more related and more affiliated with others than men, whereas men are more autonomous and more individualism (Chodorov, 1990; Schwartz & Rubel, 2005). "Cultural feminist" theories posit women's "self-in-relation," in contrast to men's greater autonomy (Scott, 1988). They claim that women show more concern for an ethic of care and responsibility, while men focus more on an ethic of rights based on justice and fairness (Gilligan, 1982). Socialization also contributes: societies typically socialize boys and girls to occupy different social roles and to affirm different life goals and sanction them for failing, those expected-value differences among gender can lead to different valued-preferences. Psychoanalytic, role learning, cultural feminism, and evolutionary theories of gender differences led values researchers to postulate that men emphasize self-instrumental values like power, while females emphasize expressive-communal values like benevolence (Prince-Gibson & Schwartz, 1998). Cross-cultural studies (Schwartz & Rubel, 2005) reveal that the pattern of gender differences in value priorities on average holds across 70 countries. However, there is much

variation across countries in the size of these differences, and men and women do not differ consistently on conformity and tradition values (Deaux & Major, 1990). For example, in Israeli, results from a student sample show that the only significant gender difference was higher priority of benevolence value among girls (Levy & Guttman, 1974), but in the Italy, sample results show higher priority of power value among men and in the South Africa, women attributed more importance to traditional values.

- Education

Educational experiences increase people knowledge and cognitive Ability, which may lead to refusal of unquestioning acceptance of prevailing norms expectations, and traditions, thereby undermining conformity and tradition values. Also, its positive effect, such as the intellectual openness, flexibility, and breadth of perspective, could promote favor for self-direction values and stimulation (Kohn & Schooler 1983). Meanwhile, the increasing competencies to cope with life that people acquire through education may also reduce the importance given to security values. And students constantly exposed to environment that emphasize grade and comparison of performance probably attribute to higher importance positive connection with achievement values.

Students may view their university majors as important elements for their future career; therefore, choice of major is a significant behavioral indicator of individuals' goals and values. Roccas (1997) postulate that economics majors (economics, accounting, business administration) are likely to give higher priority to power and achievement values, and humanities majors (language and literature, history, philosophy, Jewish studies) to universalism values.

- Religion

Prior research confirmed theorizing that individual religiosity relates positively to giving priority to conformity and tradition values and negatively to giving priority to hedonism, self-direction, and stimulation values (Roccas & Schwartz, 1997; Schwartz & Huisman, 1995). Less consistent positive associations have been found for benevolence values and negative associations for achievement and power values. Stimulation values did not correlate significantly with religiosity, although the correlation was in the expected negative direction.

2.4.3 Other sources

Typically, people adapt their values to their life circumstances. They upgrade the importance of values they can readily attain and downgrade the importance of values whose pursuit is blocked (Schwartz & Bardi, 1997). For example, people in jobs that afford freedom of choice increase the importance of self-direction values at the expense of conformity values (Kohn & Schooler, 1983). Upgrading attainable values and downgrading thwarted values applies to most, but not to all values. The reverse occurs with values that concern material well-being (power) and security. When such values are blocked, their importance increases; when they are easily attained their importance drops. For example, people who suffer economic hardship and social upheaval attribute more importance to power and security values than those who live in relative comfort and safety (Inglehart, 1997)

Chapter 3: Methods

3.1 Database

In this dissertation, the database is provided by the “European Social Survey” (<http://www.europeansocialsurvey.org/>). European Social Survey (ESS) is an academically-driven multi-country survey, which has been administered in over 30 countries (including Portugal). The up-to-date database is 2.0 version in round 6th in 2012. In this sixth round, the survey covers 29 countries and employs the most rigorous methodologies. It is funded via the European Commission's 7th Framework Programme, the European Science Foundation and national funding bodies in each country.

The core module including: media, trust in institutions, political engagement, socio-political values, moral and social values, social capital, subjective well-being, social exclusion, national, ethnic, religious, identity, well-being, health and security, demographic composition, education

and occupation, financial circumstances and household circumstances. While the rotating module in the 6th round covers Personal and Social Well-being and Europeans' understandings and evaluations of democracy. Moreover, two supplementaries (Human value scale and test questions) and one interviewer questionnaire are provided.

3.2 Sampling

The survey involves strict sampling rules and implementation. Since the more completely the frame covers the persons belonging to the target population, the higher the quality of the sample will be. The ESS raises requirement of full coverage of the target population. The definition of the target population is person who 15 years or older and are resident within private households, regardless of their nationality, citizenship, language or legal status. However, drawing an all-sided frame of sample is not easy. In this case, in order to have a better coverage of the sample, ESS adopts multi-stages sample design, in which the primary sampling units (PSUs) forms the first stage and the selection of PSUs follows at the second stage of sampling.

And the consideration for response rates comes after. ESS set the fixed goal of response rates with the minimal of 70%. Since the insufficient response rates may increase the danger of bias, the ESS uses any possible methods to meet this requirement, such as increasing the gross sample size.

Also, the ESS uses the “design effect” to ensure the comparability of estimates. The definition of design effect is the ratio of the variance of a variable under the actual sample design to the variance computed under the assumption of simple random sampling. The PSUs and unequal probability selections method are the main source influencing the design effect. The number of respondents chosen per PSUs is smaller; the design effect is better, while the unequal probability selection is around 1.2.

For more detailed of sampling, the ESS provides the document of “Sampling for the European Social Survey Round VI: Principles and Requirements.”

3.2 Human Values Questionnaire

In the Euro Social Survey (ESS), it uses modified version of Portrait Values Questionnaire (PVQ) (Schwartz, 2003; Schwartz, Lehmann, & Roccas, 1999; Schwartz, Melech, Lehmann, Burgess, & Harris, 2001) to evaluate the ten motivational values and named as Human value scale. This scale contains 21 items instead of 40, and it presents the interviewee with a more concrete and less cognitively complex task.

Each item is implicitly to portrait people's personality, since it describes a person's goals, aspirations, or wishes. For example: "It's very important to him to help the people around him. He wants to care for other people. " Describes a person for whom Benevolence values are important. "It is important to him to listen to people who are different from him. Even when he disagrees with them, he still wants to understand them. " describes a person who cherishes universalism values. For each items, respondents answer: "How much like you is this person?" Answers are given on a 6 point asymmetric bipolar categorical scale (very much like me, like me, somewhat like me, a little like me, not like me, not like me at all). Attitude from very much like to not like me at all are rated from 1 to 6, the less score is owned, the more importance is given. And People are asked to compare the portrait to themselves, rather than themselves to the portrait, and focus on the similarities rather than differences between the portrait and themselves (Schwartz, 2007). For the full version of Human value scale, see the Appendix 1.

3.4 Variables -occupational group and motivational value

Education level, in some extends, influences the job level. The labor market has some requirements in recruitment the freshmen from school, such as above bachelor degree and chemistry major is required for this job. Those requirements affect occupational choices. Researches also point out that the major is the other way associate with job match (Sloane, 2003; Robst, 2007), such as English major student could not capable with medicine job.

As noted above, education has its impact on occupational choice. Also it has its impact on value priority (Kohn & Schooler 1983). Therefore, I rise the hypothesis that same occupational group

has certain similar value preference. Managers maybe more value achievement value than average people, since they more concern about their career’s success, abilities and ambitiousness. Plant and machine operators and assembles maybe more value security value than population level, because in the plant, they face more danger and those danger effects can cause server problems to themselves or public.

3.5 Computing methods

As 2 or 3 items contribute to one value score, before we compute the value priority, we should compute into the score which is comparable. Table 4 shows the computing methods of for the score of 21 items. And those computing methods are provided by ESS and described in the document “Computing Scores for the 10 Human values”(S Schwartz).

Table 4: Computing methods

Values	Items in Index	Raw Scores	Centered value score
Conformity	7,16	Mean(V ¹ 7+V16)	MEAN(v7, v16) – MART ²
Tradition	9,20	Mean(V9+V20)	MEAN(v9, v20) - MART
Benevolence	12,18	Mean(V12+V18)	MEAN(v12, v18) - MART
Universalism	3,8,19	Mean(V3+V8+V19)	MEAN(v3, v8, v19)-MART
Self-Direction	1,11	Mean(V1+V11)	MEAN(v1, v11) - MART
Stimulation	6,15	Mean(V6+V15)	MEAN(v6, v15) - MART
Hedonism	10,21	Mean(V10+V21)	MEAN(v10, v21) - MART
Achievement	4,13	Mean(V4+V13)	MEAN(v4, v13) - MART
Power	2,17	Mean(V2+V117)	MEAN(v2, v17) - MART
Security	5,14	Mean(V5+V14)	MEAN(v5, v14) - MART
<p>1. V represents the score. V1 represent the score of the first question in the questionnaire, V2 represents the second items in the questionnaire and so forth.</p> <p>2. MART represents each individual’s mean score over all 21 value items, namely equal mean (V1 to V21).</p>			

When comes to the analysis, Schwartz also gives some recommendations: 1. for correlation analyses: Use the centered value scores. 2. for group mean comparisons, analysis of variance or of covariance (t- tests, ANOVA, MANOVA, ANCOVA, MANCOVA): Use the centered value scores as the dependent variables. 3. for multidimensional scaling, canonical, discriminant, or confirmatory factor analyses: Use raw value scores for the items or 10 value means. Those computing methods and analysis recommendation are provided by ESS and described in the document “Computing Scores for the 10 Human values” (Schwartz).

3.6 Statistics method

For analyzing the correlation between variables, I used the Eta-squared to make the evaluation and the recognized significant level is at 95%. There are some requirements for choosing the method to evaluate the correlation in this case and Eta-squared satisfy these requirements. The method should be available for analyzing association between nominal variable and quantitative variable. Also it should be available for multi-dimensional analyses, since those two variables own 10-dimensionality. And according to the rule of thumb by Cohen, the interpretation as following: 0.02 means small association; 0.13 means medium association and 0.26 means large association.

In order to analyzing the mean difference of different occupational groups towards evaluating values, I use univariate method of the General linear modeling (GLM) in SPSS. For the GLM, it is a flexible statistical model that incorporates normally distributed dependent variables and categorical or continuous independent variables. For univariate method, it is used for multiple independent variables towards a single dependent variable. In this case, the dependent variable is value type and the independent variables are occupational groups with the contrast by deviation. Therefore, we choose univariate method rather than Multivariate.

Under the univariate method, it provide many information of statistics analyses, we will just focus on the Homogeneity test and its corresponding analyzing results. In the Custom Hypothesis

Tests, if the significant level is bigger than 0.05, we will accept the hypothesis that this occupational group is equal to the mean of the whole sample in the evaluation of values.

Chapter 4: Analysis and result

4.1 Sample characteristics

The Portugal data provided by ESS includes 2151 participants, and 1829 are valid by excluding the missing value of occupation. Since, I am going to analyze individual by occupation, therefore, those 1829 will be my sample in this dissertation.

Among 1829 participants, 51.2% are female and 48.8% are male. Concerning the ages, the majority of the participants have age between 25 and 54 years old (49.7%), while 25.8% was occupied by people older than 64 years old, 18.1% of the sample are between 55 and 64 years old. And the lowest percentage (6.4%) was belonged to the group from 15 to 24 years old.

Regarding the academic background, 52.4% of the participants have primary education or less, 33% have secondary education, 14.3% have a tertiary or higher education.

When asked about occupation, 0.4% have answered as arm-force occupations, 2.3% have answered as manager, 11.1% have answered as professionals, 7.0% have answered as technicians and associated professionals, 7.4% have answer as clerical support workers, 21.1% percent has answer as service and sales workers, 6.9% have answer as skilled agricultural, forestry and fishery workers, 14.1% have answer as craft and related trade worker, 15.3% have answer as plant and machine operators and assembles, and 14.5 of the participants have answer as elementary occupations.

In terms of the religion, 95.6% of Portuguese are belonging to Roman Catholic, 0.3% have answer as Protestant, 02.% have answer as Eastern Orthodox, 3.7% have answer as Other Christian denomination and 0.2% have answer as Islamic.

4.2 Association analysis

As shown by table 5, those value types do have association with occupational types in statistics' analysis, except benevolence value (significant level >0.05). And according to the rule of thumb by Cohen, the interpretation as following: 0.02 means small association; 0.13 means medium association and 0.26 means large association. We can know that, security, universalism, hedonism and power own small association (less than 0.02) with occupation. Stronger associations between occupations and values are found in achievement, conformity and stimulation. The strongest associations among those ten values towards occupations are belong to tradition and self-direction.

Table 5: Correlations among value types and occupation

Value type	Significant level	Eta	Eta square
Security	0.000**	.136	.018
Benevolence	0.226	.082	.007
Universalism	0.013*	.110	.012
Self-direction	0.000**	.215	.046
Tradition	0.000**	.233	.054
Achievement	0.000**	.166	.028
Conformity	0.000**	.170	.029
Hedonism	0.020*	.106	.011
Power	0.001*	.124	.015
Stimulation	0.000**	.147	.022

* $p < .05$. ** $p < .001$.

4.3 Occupational Characteristics towards Values

From the literature review, we know that there is a phenomenon of similar values' rankings across-culture. In this section, those similar norms (Portuguese norms) will be taken account in order to develop meaningful and corrective interpretations. According to the table 6-1, we can know the Portuguese norms of values' rating and ranking. There is no doubt that security is the most important value among Portuguese, and followed by concern to closed group(benevolence,2th) and other groups(universalism,3rd), those values are strongly associated with smoothing society. There is also a fair amount of willingness to encourage individuals to think and act freely (self-direction, 4th), contribute to group solidarity (tradition, 5th) and need the social standard of success (achievement, 6th). Avoiding conflicts and violations of group norms (conformity, 7th) comes after, when self-gratification (hedonism, 8th) or self-desire for authority (power, 9th) and stimulation (10th) rank last.

Table 6: Portuguese rating and ranking

Value Type	Portuguese Norms	
	Mean Rating	Mean Rank
Security	2.34	1
Benevolence	2.38	2
Universalism	2.49	3
Self-direction	2.58	4
Tradition	2.72	5
Achievement	2.84	6
Conformity	3.00	7
Hedonism	3.16	8
Power	3.52	9
Stimulation	3.62	10

In this part of results' analysis, firstly, we will focus on the general perspectives which used the raw scores of values as basic data. According to the differences of ratings and rankings between

specific occupational groups and the Portuguese, we will know the occupational groups' general profile in value preferences.

Secondly, we will try to figure out the occupational priorities of values by using the center values score. If the significant level is not more than 0.05, when making the comparisons between occupational groups and the Portuguese in values' means, we will consider the difference are existed and recognized these values' preference as occupational characteristics. Also I will try to make the interpretation of the difference by connecting with the job responsibilities, requirements, environment and other relative reasons.

And according to scale design in rating (1 means very important, 2 means important, 3 means moderate important and 4 means a little bit important, 5 means unimportant and 6 means very unimportant) and my definition of rating difference is occupational mean minus Portuguese mean, the negative rating difference means occupational group shows more impotence to certain value and vice visa.

4.3.1 Manager's preference in value types:

As showed by table 7-1, in the far left column, we can know the average importance ratings of the 10 values types among managers. The average Portuguese manager rated benevolence value most important, universalism rank a close second, security rank at third. Those suggest that the manager cares welfare of their close groups (benevolence, 1st) and meanwhile considers autonomy in thinking and acting (self-direction, 2nd). Welfare of other group (universalism, 4nd) and maintaining safety (security, 3rd) comes after. Achievement (5th) and tradition (6th) shift their ranks when comparing with the corresponding Portuguese ranks. The ranks of remaining value types are same as ranks of Portuguese. Considering the rating difference, it is not hard to find that in average, manager group tend to give higher importance to nine value types, except traditional value.

In terms of statistics analysis, managers show difference in traditional value and self-direction value. Managers should make decision for the company or in charge or company's direction,

which required them to have ability of independent thought and action choosing. These job requirements may facilitate managers to show more attention to self-direction. For traditional value, which represents the humble, moderate and respect to the old people, may conflicts or irrelative with their responsibilities of caring efficiency and interest, so managers may tend to give lower importance to it.

Table 7-1: Importance of value types for Portuguese managers

Manager's norms		Value Type	Portuguese norms		Rating Difference	Significant level ¹
Mean Rating	Mean Rank		Mean Rating	Mean Rank		
2.202	3	security	2.337	1	-0.135	0.162
2.026	1	Benevolence	2.385	2	-0.359	0.360
2.268	4	Universalism	2.485	3	-0.217	0.40
2.072	2	Self-direction	2.577	4	-0.505	0.016*
2.727	6	Tradition	2.723	5	0.003	0.002*
2.348	5	Achievement	2.842	6	-0.493	0.128
2.840	7	Conformity	2.995	7	-0.156	0.128
2.959	8	Hedonism	3.160	8	-0.201	0.451
2.995	9	Power	3.523	9	-0.528	0.111
3.118	10	Stimulation	3.624	10	-0.505	0.098

1: Using the center score value to test the significant level of mean differences. * $p < .05$. ** $p < .001$.

4.3.2 Professional's value hierarchy:

As shown by table 7-2, among the Portuguese professionals, they rank values which relative with smooth social function (benevolence, 1st; security 2nd and universalism 3rd) in the top three places. And then their autonomy right (self-direction, 4th) and social contribution to society (achievement, 5th) comes after. Self-gratification (hedonism, 7th) and respect culture (tradition, 7th) occupied the same rank of 7. Avoiding disruption of interpersonal relations (conformity, 8th) and perusing of excitement and novelty (stimulation, 9th) seems less important, when authority and wealth (power,

10th) is least important. When comes to comparison in light of Portuguese norms, in average, except tradition, conformity and power, professionals tend to be more care about other value types.

However, those differences are significant in statistics except in security, benevolence and stimulation. For professional occupation, universalism which presents broadminded and wisdom, self-direction which represents autonomy right to design their research directions or topics, achievement which represents occupied society defined success (publication in authoritative magazine) and abilities, hedonism which represents their interested topic or field, are rated more important. Obviously, values which show positive and closed relationship with their job responsibilities and requirements are being over-estimated. However, tradition which is abstract and lack of scientific evidence, conformity which means restriction of actions and inclinations, and power which in some extend means wealth and social power, are rated less important. According to these interpretations, it is not hard to find that the facilitated-job value seems more important and vice versa.

Table 7-2: Importance of individual value types for Portuguese professionals

Professionals' norms		Value Type	Portuguese norms		Rating Difference	Significant level ¹
Mean Rating	Mean Rank		Mean Rating	Mean Rank		
2.260	2	security	2.337	1	-0.077	0.361
2.240	1	Benevolence	2.385	2	-0.145	0.599
2.270	3	Universalism	2.485	3	-0.215	0.000**
2.290	4	Self-direction	2.577	4	-0.287	0.000**
2.880	7	Tradition	2.723	5	0.157	0.000**
2.530	5	Achievement	2.842	6	-0.312	0.019*
3.140	8	Conformity	2.995	7	0.145	0.000**
2.880	7	Hedonism	3.160	8	-0.280	0.047*
3.540	10	Power	3.523	9	0.017	0.000**
3.390	9	Stimulation	3.624	10	-0.234	0.203

1: Using the center score value to test the significant level of mean differences. * $p < .05$. ** $p < .001$.

4.3.3 Technicians’ and associated professionals’ value hierarchy:

As shown by table 7-3, Portuguese Technicians and associated professionals rate safe problems (security, 1st) as the most important, and then autonomy thinking and act (self-direction, 2nd) comes second, and the followers are welfare of in-group (benevolence, 3rd) and outside group (universalism, 4th). Social status or success (achievement, 5th) and maintaining tradition and social norms (tradition, 6th and conformity, 7th) occupied moderate importance. Similar with Portuguese norms, hedonism, power and stimulation occupied the last three ranks separately. In terms of comparison with whole sample, averagely speaking, Portuguese Technicians and associated professionals are more care about those ten values, by giving lower grades.

However, only self-direction value shows statistic difference with Portuguese sample. Technicians and associated professionals usually under supervise of professionals and may lack the autonomy right to design the topic of research. The career path, becoming professional, is obvious for this occupational group. Therefore, the absent and visible autonomous rights may trigger their attention and desire to self-direction.

Table7-3: Importance of individual value types for Portuguese Technicians and associated professionals

Technicians’ and associated professionals’ norms		Value Type	Portuguese norms		Rating Difference	Significant level ¹
Mean Rating	Mean Rank		Mean Rating	Mean Rank		
2.280	1	security	2.337	1	-0.057	0.106
2.320	3	Benevolence	2.385	2	-0.065	0.408
2.350	4	Universalism	2.485	3	-0.135	0.278
2.300	2	Self-direction	2.577	4	-0.277	0.314
2.690	6	Tradition	2.723	5	-0.033	0.122

2.670	5	Achievement	2.842	6	-0.172	0.022*
2.950	7	Conformity	2.995	7	-0.045	0.990
2.980	8	Hedonism	3.160	8	-0.180	0.643
3.360	9	Power	3.523	9	-0.163	0.329
3.480	10	Stimulation	3.624	10	-0.144	0.528

1: Using the center score value to test the significant level of mean differences. * $p < .05$. ** $p < .001$.

4.3.4 Clerical support workers' value hierarchy:

As shown by table 7-4. The safety questions occupied the most important place, when the welfare of closed group comes second. Autonomous rights and Care for others outside group are occupied 3rd and 4th important places. Moderate importance is given to social status or success (achievement, 5th), traditional customs and culture (tradition, 6th), self-gratification (hedonism, 7th) and self-restriction to avoid conflicts (conformity, 8th). Pursuing excitement (simulation, 9th) and wealth and power (power, 10th) almost seems rarely important to this occupational group. In terms of comparison with the whole sample, averagely speaking, except tradition, conformity and power are be lower viewed by importance, all others are overestimated.

There are not significant differences in the significant level of 0.05 among those ten value types. For the further study, we could focus on the minor groups of clerical support workers.

Table 7-4: Importance of individual value types for Portuguese Clerical support workers

Clerical support workers' norms		Value Type	Portuguese norms		Rating Difference	Significant level ¹
Mean Rating	Mean Rank		Mean Rating	Mean Rank		
2.210	1	Security	2.337	1	-0.127	0.279
2.340	2	Benevolence	2.385	2	-0.045	0.195
2.420	4	Universalism	2.485	3	-0.065	0.093
2.400	3	Self-direction	2.577	4	-0.177	0.495

2.810	6	Tradition	2.723	5	0.087	0.660
2.740	5	Achievement	2.842	6	-0.102	0.174
3.070	8	Conformity	2.995	7	0.075	0.086
3.010	7	Hedonism	3.160	8	-0.150	0.076
3.550	10	Power	3.523	9	0.027	0.325
3.400	9	Stimulation	3.624	10	-0.224	0.995

1: Using the center score value to test the significant level of mean differences. * $p < .05$. ** $p < .001$.

4.3.5 Services and sales workers' value hierarchy:

As shown by table 7-5, Services and sales workers almost follow the ranks of Portuguese norms except exchange between tradition (6th) and achievement (5th). When compared with the whole sample by rating, in general, except security, benevolence and tradition get lower estimated according to their importance, all others are valued higher.

The only difference shown in statistics is appeared in conformity. It means that services and sales workers treat restraint of action, avoiding doing the wrong things and being polite and obedient more important than the whole sample. Considering about the job property, I speculate that conformity (being polite to client) may be daily penetrated into their mind by taking, training and other method. Therefore, they tend to give higher importance to conformity.

Table 7-5: Importance of individual value types for Portuguese Services and sales workers

Services and sales workers' norms		Value Type	Portuguese norms		Rating Difference	Significant level ¹
Mean	Mean		Mean	Mean		
Rating	Rank		Rating	Rank		
2.370	1	Security	2.337	1	0.033	0.345
2.390	2	Benevolence	2.385	2	0.005	0.628
2.470	3	Universalism	2.485	3	-0.015	0.100

2.520	4	Self-direction	2.577	4	-0.057	0.907
2.790	6	Tradition	2.723	5	0.067	0.360
2.780	5	Achievement	2.842	6	-0.062	0.644
2.910	7	Conformity	2.995	7	-0.085	0.036*
3.140	8	Hedonism	3.160	8	-0.020	0.566
3.480	9	Power	3.523	9	-0.043	0.965
3.600	10	Stimulation	3.624	10	-0.024	0.576

1: Using the center score value to test the significant level of mean differences. * $p < .05$. ** $p < .001$.

4.3.6 Skilled agricultural, forestry and fishery workers' value hierarchy:

In table 7-6, we can know security and benevolence still occupied the first and second place among skilled agricultural, forestry and fishery workers. However, tradition value rises to 3rd place, when universalism and self-direction separately degrade to 4th and 5th. And the replacement happens between achievement and conformity. The last three places are still occupied by the same value types as Portuguese norms. Generally speaking, except tradition is overrated, all others value types are underestimated in rating.

The mean difference in tradition is being proved by the statistics. Skilled agricultural, forestry and fishery workers think that it is more important for them to accept the customs and traditional ideas. Considering the background of skilled agricultural, forestry and fishery workers, they are usually tend to be less educated, which may cause undoubtedly acceptance of tradition and then tend to give higher importance. Independent thoughts and action choosing (self-direction), high competence (achievement), being obedient and polite (conformity), social power and wealth (Power), novelty and challenge (stimulation) seems irrelative or low relative with their job, these may lead to lower rating of importance.

Table 7-6: Importance of individual value types for Portuguese Skilled agricultural, forestry and fishery workers

Skilled agricultural, forestry and fishery workers' norms		Value Type	Portuguese norms		Rating Difference	Significant level ¹
Mean Rating	Mean Rank		Mean Rating	Mean Rank		
2.620	1	Security	2.337	1	0.283	0.925
2.660	2	Benevolence	2.385	2	0.275	0.809
2.780	4	Universalism	2.485	3	0.295	0.210
2.990	5	Self-direction	2.577	4	0.413	0.001*
2.700	3	Tradition	2.723	5	-0.023	0.000**
3.270	7	Achievement	2.842	6	0.428	0.000**
3.080	6	Conformity	2.995	7	0.085	0.009*
3.500	8	Hedonism	3.160	8	0.340	0.222
3.620	9	Power	3.523	9	0.097	0.050*
4.140	10	Stimulation	3.624	10	0.516	0.000**

1: Using the center score value to test the significant level of mean differences. * $p < .05$. ** $p < .001$.

4.3.7 Craft and related trade workers' value hierarchy:

In table 7-7, we can know that for craft and related trade workers, the ranks of those ten value types are mostly same as Portuguese, except the replacement of power and stimulation. Security, benevolence, universalism, conformity and power are underestimated for their importance, when the other five value types are rated more important.

Considering the difference in statistics, only tradition and achievement are significant. The reason of overestimation in tradition, probably because they owned lower educational level, the same as skilled agricultural, forestry and fishery workers. For achievement, craft and related trade

workers also give more importance, the main reason maybe requirement of specific technical and practical knowledge and skills. Those requirements strengthen the importance of competence according to social standards (achievement).

Table 7-7: Importance of individual value types for Portuguese Craft and related trade workers

Craft and related trade workers' norms		Value Type	Portuguese norms		Rating Difference	Significant level ¹
Mean Rating	Mean Rank		Mean Rating	Mean Rank		
2.380	1	Security	2.337	1	0.043	0.214
2.440	2	Benevolence	2.385	2	0.055	0.386
2.490	3	Universalism	2.485	3	0.005	0.194
2.540	4	Self-direction	2.577	4	-0.037	0.941
2.630	5	Tradition	2.723	5	-0.093	0.005**
2.840	6	Achievement	2.842	6	-0.002	0.025*
3.020	7	Conformity	2.995	7	0.025	0.720
3.110	8	Hedonism	3.160	8	-0.050	0.811
3.550	10	Power	3.523	9	0.027	0.098
3.500	9	Stimulation	3.624	10	-0.124	0.203

1: Using the center score value to test the significant level of mean differences. * $p < .05$. ** $p < .001$.

4.3.8 Plant and machine operators and assembles' value hierarchy:

Comparing with the ranks of Portuguese norms, for group of plant and machine operators and assembles, except the replacement happen between self-direction and tradition, achievement and conformity, other ranks keep same positions. Benevolence, tradition, conformity and power are being overestimated in their importance, other values are rating less important.

In terms of different statistics, except security, benevolence and power are not significant, others values significantly different with the Portuguese sample. Caring the welfare of other groups (universalism), autonomy right (self-direction), and ownership of society-recognized competency (achievement) seems difficult or irrelative for their job, which cause underestimation. Hedonism and stimulation, which represent gratification and novelty, are conversed with their repeated and trivial job also being lower valued. However, tradition is higher valued because of their educational background, when conformity is higher valued and it may be caused by the emphasis of obeying in their jobs.

Table 7-8: Importance of individual value types for Portuguese Plant and machine operators and assembles

Plant and machine operators and assembles ' norms		Value Type	Portuguese norms		Rating Difference	Significant level ¹
Mean Rating	Mean Rank		Mean Rating	Mean Rank		
2.340	1	Security	2.337	1	0.003	0.239
2.370	2	Benevolence	2.385	2	-0.015	0.066
2.500	3	Universalism	2.485	3	0.015	0.010*
2.740	5	Self-direction	2.577	4	0.163	0.001*
2.650	4	Tradition	2.723	5	-0.073	0.002*
3.000	7	Achievement	2.842	6	0.158	0.000**
2.910	6	Conformity	2.995	7	-0.085	0.003*
3.290	8	Hedonism	3.160	8	0.130	0.039*
3.520	9	Power	3.523	9	-0.003	0.909
3.820	10	Stimulation	3.624	10	0.196	0.005*

1: Using the center score value to test the significant level of mean differences. * $p < .05$. ** $p < .001$.

4.3.9 Elementary occupations' value hierarchy:

In the mean ranks of elementary occupations, the only difference with Portuguese norms is the replacement between self-direction and tradition. And except security and tradition value are rated more importance, all other 8 values are underestimated.

In terms of statistics analysis, the differences in security, self-direction, tradition and achievement are obvious. Lower education level easily caused highly importance in Tradition. Elementary occupations which are basic, easily-replaced and noncompetitive in the labor market, makes them more value security and less value achievement and self-direction. Achievement and self-direction are almost out of their reach and irrelevant in their jobs.

Table 7-9: Importance of individual value types for Portuguese Elementary occupations

Elementary occupations' norms		Value Type	Portuguese norms		Rating Difference	Significant level ¹
Mean Rating	Mean Rank		Mean Rating	Mean Rank		
2.280	1	Security	2.337	1	-0.057	0.000**
2.430	2	Benevolence	2.385	2	0.045	0.313
2.610	3	Universalism	2.485	3	0.125	0.491
2.840	5	Self-direction	2.577	4	0.263	0.000**
2.650	4	Tradition	2.723	5	-0.073	0.000**
3.020	6	Achievement	2.842	6	0.178	0.002*
3.060	7	Conformity	2.995	7	0.065	0.444
3.350	8	Hedonism	3.160	8	0.190	0.062
3.660	9	Power	3.523	9	0.137	0.301
3.780	10	Stimulation	3.624	10	0.156	0.300

1: Using the center score value to test the significant level of mean differences. * $p < .05$. ** $p < .001$.

4.3.10 Armed-force occupations' value hierarchy:

In terms of armed-force occupations, there is a problem in analysis. The number of Portuguese armed-force occupations is 8, which is too few to make an effective study. According to the 8 interviewees, I got result as shown by table 7-10. Since those results are not rigorous, I will not use them to make any result, but it can be seen as an exploration.

Table 7-10: Importance of individual value types for Portuguese Armed-force occupations

Armed-force occupations' norms		Value Type	Portuguese norms		Rating Difference
Mean Rating	Mean Rank		Mean Rating	Mean Rank	
2.380	1	Security	2.337	1	0.043
2.500	3	Benevolence	2.385	2	0.115
3.010	7	Universalism	2.485	3	0.525
2.710	4	Self-direction	2.577	4	0.133
2.990	6	Tradition	2.723	5	0.267
2.480	2	Achievement	2.842	6	-0.362
3.060	8	Conformity	2.995	7	0.065
2.910	5	Hedonism	3.160	8	-0.250
3.420	9	Power	3.523	9	-0.103
3.570	10	Stimulation	3.624	10	-0.054

1: Using the center score value to test the significant level of mean differences.

4.3.11 Summary of differences between occupations and values

According to table 8, tradition and self-direction show the most sensitive when making the comparisons between groups and the whole sample, 6 of 9(irrespective of armed-force occupations) occupational groups are different when compared with the whole sample. Therefore, I will suggest tradition and self-direction can be sensitive indicators to make evaluations about occupational groups' properties of values. It is also obvious that higher qualified people (manger and professionals) tend to give lower importance to tradition value, when lower qualified people

(skilled agricultural, forestry and fishery workers craft and related trade worker, plant and machine operators and assembles and Elementary occupations) tend to give higher importance of tradition. For self-direction, when the higher qualified occupational camp more value self-direction, lower qualified occupational camp less value self-direction.

The following valued indicators of different occupations are achievement (5 of 9) and conformity (4 of 9); however, they are not obvious disciplinary as tradition and self-direction. And benevolence is the only value which same to all occupations, and I suggest it could be treated as irrelative indicators to explore occupational differences.

Table 8: summary of values' differences in different occupations

	Security	Benevolence	Universalism	Self-direction	Tradition	Achievement	Conformity	Hedonism	Power	Stimulation
Managers				P	N					
Professionals			P	P	N	P	N		N	
Technicians and associated professionals				P						
Clerical support workers										
Services and sales workers							P			
Skilled agricultural, forestry and fishery				N	P	N	N		N	N
Craft and related trade workers					P	P				
Plant and machine operators and assembles			N	N	P	N	P	N		N
Elementary occupations	P			N	P	N				
Armed-force occupations										
Numbers of statistics difference	1	0	2	6	6	5	4	1	2	2

Only the significant level of difference is not more than 0.05 will be filled with N or P; N present gives less importance, P present gives more importance.

Chapter 5: Discussion and recommendation

5.1 Main conclusions

The starting point of this study is exploring occupational characteristics of motivational values' preference. According to the previous steps, we could have the conclusion that occupational groups do have value preferences. In order to accomplish this goal, data analysis has been conducted with the purpose of answering this objective. Except clerical support workers and arm-forced occupational group (insufficiency sample capacity) are not founded with significant orientations toward values, other 8 occupational groups are supported with certain value preferences. Therefore, in the whole picture, we can believe that presented results confirm our objective that occupational value's characteristics are existed.

In addition, results have a clear convergence with previous research (e.g. Campbell, 1975; Parsons, 1951; Schwartz & Bardi, 1997; Schwartz, 2006), the values' ranks of Portuguese are followed the referenced cultural norms for the whole.

For rating of values, they are influenced by occupational environment. Research shows that Experience and cultural pressures could draw people's attention to certain values (Roccas, Sagiv, Schwartz, & Knafo, 2002), if the values are daily connected and encouraged, it may be rated more important.

Furthermore, we also found that some values could be the sensitive indicators of occupational differentiate of values: tradition and self-direction, since those two values are rated statically different among 6 working groups, while benevolence could be treated as the irrelevant indicator. Even though there is limited evidence about these presumptions, they raise a new perspective to research and could trigger people's attention to uncover the behind reasons.

Most of all, we can consider this study as the evidence of proving occupational characteristics towards motivational values and supporting differentiated motivated policies.

5.2 Contributions

Generally this study provides us another perspective to view the relationship between occupational characteristics and occupational motivation, and boost our understanding about motivational values of employees. Moreover, the inferred results could be supported evidence for organizations to using differentiated motivate policy.

Our study also confirms the previous research about cross-cultural norms (Schwartz, 2006) of ranking and rating of values according the data analysis of Portuguese occupational people in 2012. According to occupational groups' results, relevantly evidences also confirm Schwartz theory about roots of theory: education affects people's opinion about tradition (lower educated will more valued tradition and vice versa) and reachable and encouraged values will be more valued.

We highlight that this article could be the exploring evidence to dig out the more specific details about occupational' preference of values, since there are still many minor groups under the major occupational group and the differences of working environment are also existed among the minor groups.

5.3 Limitations of this study

In a whole picture, we reached our objectives and make a clear state of the contribution, however, the limitations of this study should be kept in mind when citing or interpreting the results. Firstly, according to data provided by ESS, the sample of arm-force occupation is quiet small, we could not reach an outcome in this occupational group, namely, I fail to address the occupational characteristics of arm-force occupational group. This is unfinished part are still needed deeper study.

Moreover, according to distributions of population, the sample amounts of different occupations are obvious discrepant, occupational groups who occupied largest number of the whole sample may have stronger influence to the Portuguese norms of rating or ranking.

The third limitation is concerned with applied questionnaire. Since this version of questionnaire is the adopted one of Human value scale or portrait value scale, study (Davidov and Eldad, 2009) found that there is a weak distinguished power among several values. Those higher correlations among values can lead to interacted influence and affect results of this study. The weaknesses of using questionnaire method to collect data, such as interviewees' avoidance of making bad image and pursuing of meeting social exaptation, in some extend, could not eliminated.

The fourth limitation is concerned with values. Because values might get different meaning or representatives across different countries, therefore, when citing the result to explain questions of other countries, the interpretation should be careful.

5.4 Directions for further research

Concerning this study and addressing the referred limitations, some suggestions for further study could be provided. Since this study is an exploration, repeated researches should be continued to examine this result, especially in terms of different countries perspectives. And according to the limitation part, the questionnaire is defective among some highly correlated values. Other questionnaires or theory models may be more suitable for exploring the relationship between occupations and value orientation.

There is a need to make a deeper study in terms of occupations. Since there are plenty of minor groups under those ten major occupational groups, and the difference of minors groups under the same occupational group are also significant. Here, this study does not included consideration of industrial difference, scale of the company and so on; those uninvolved aspects could be relevant with this theme.

Moreover, exploring the factors behind occupational characteristics could be other perspectives. Those characteristics of different occupations may cause by age, gender, education, job properties and so on, it could be very complicated and mixed factors are behind those similarity. The relationship between those factors and occupational characteristics are stilled need to study and the process of those factors trigger those similarities also needed to unearth.

Since those ten value types are stilled remaining in an abstract level, the specific representatives of those ten values also should be linked to occupations in order to make a more detailed and convenient application in the workplace.

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Appendix

Appendix 1: 21 Portrait Value Scale (male version)

	How much like you is this person?					
	Very much like me	Like me	Some- what like me	A little like me	Not like me	Not like me at all
1. Thinking up new ideas ¹ and being creative is important to him. He likes to do things in his own original way.	1	2	3	4	5	6
2. It is important to him to be rich. He wants to have a lot of money and expensive ² things.	1	2	3	4	5	6
3. He thinks it is important that every person in the world should be treated equally. He believes everyone should have equal opportunities in life.	1	2	3	4	5	6
4. It's important to him to show ³ his abilities. He wants people to admire ⁴ what he does.	1	2	3	4	5	6
5. It is important to him to live in secure ⁵ surroundings. He avoids anything that might endanger his safety.	1	2	3	4	5	6
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 ⁶ .	1	2	3	4	5	6
7. He believes that people should do what they're told ⁷ . He thinks people should follow rules ⁸ at all times, even when no-one is watching.	1	2	3	4	5	6
8. It is important to him to listen to people who are						

different ⁹ from him. Even when he disagrees with them, he still wants to understand them.	1	2	3	4	5	6
9. It is important to him to be humble and modest. He tries not to draw attention to himself.	1	2	3	4	5	6
10. Having a good time is important to him. He likes to spoil ¹⁰ himself.	1	2	3	4	5	6
11. It is important to him to make his own decisions about what he does. He likes to be free and not depend ¹¹ on others.	1	2	3	4	5	6
12. It's very important to him to help the people around him. He wants to care for ¹² their well-being.	1	2	3	4	5	6
13. Being very successful is important to him. He hopes people will recognize his achievements.	1	2	3	4	5	6
14. It is important to him that the government ensures ¹³ his safety against all threats. He wants the state to be strong so it can defend its citizens.	1	2	3	4	5	6
15. He looks for adventures and likes to take risks. He wants to have an exciting ¹⁴ life.	1	2	3	4	5	6
16. It is important to him always to behave properly. He wants to avoid doing anything people would say is wrong.	1	2	3	4	5	6
17. It is important to him to get ¹⁵ respect from others. He wants people to do what he says.	1	2	3	4	5	6
18. It is important to him to be loyal to his friends. He wants to devote ¹⁶ himself to people close to him.	1	2	3	4	5	6
19. He strongly believes that people should care for ¹⁷ nature. Looking after the environment is important to him.	1	2	3	4	5	6
20. Tradition is important to him. He tries to follow						

the customs handed down by his religion or his family.	1	2	3	4	5	6
21. He seeks every chance ¹⁸ he can to have fun. It is important to him to do things that give him pleasure.	1	2	3	4	5	6

- 1 Having new ideas, with an emphasis on the creative side of having them through generating them himself.
- 2 “Expensive”: in the sense of costing a lot rather than their being ‘luxury’ items.
- 3 The idea is to show whatever abilities he has, with no assumption that he actually has great abilities. It is important to him to be perceived as being able.
- 4 He wants his actions to be admired, not his person.
- 5 In the sense of the surroundings actually being secure, and not that he feels secure.
- 6 Important for himself (his life) is the focus.
- 7 The idea here is that when someone else tells you what to do in actual interpersonal interaction, (implying also that the person has some authority), you should do it.
- 8 “Rules” in the sense of ‘rules and regulations’.
- 9 “Different” in almost any way. The key idea is that he sees difference/diversity positively and as something worth learning about.
- 10 “Spoil himself”: “treat himself” is another idiom. Strongly negative ‘self-indulgence’ is not intended.
- 11 In the sense of not to have to depend on people
- 12 “care for”: here in the sense of actively promote their well-being.
- 13 “Ensures” in the sense of ‘guarantees’.
- 14 “Exciting” more in the sense of ‘exhilarating’ than ‘dangerous’.
- 15 Get/have this respect, not deserve respect
- 16 “Devote”: is intended to convey deep concern for these people and readiness to invest his time, resources and energy in their welfare.
- 17 “care for”: look after, basically synonymous with ‘looking after’ in the second sentence.
- 18 Seeks: active pursuit rather than ‘taking every’ chance.

(The difference between female and male version of 21-PVQ is the representation of gender. In the male’ version, “he” and “him” are used, while in the female version, “he” and “him” are replaced by “she” and “her”)