A typology of professional situations in the analysis of graduate transition from higher education to the labor market

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Abstract

This article focuses on the Portuguese case to discuss the employment insertion of graduates. It starts by presenting a typology of professional situations with the purpose of analyzing graduate transition from higher education to the labor market. The heuristic potential of the typology is then described, showing its key role when analyzing two important topics in the study of the professional situation of graduates: i) the unequal distribution of individuals in the occupation structure and ii) the relationship between the graduates' positions in the occupational structure and the work orientations. Two important conclusions are drawn: in Portugal higher education continues to be permeated by reproduction logics of inequalities that go beyond this; the importance of intrinsic and extrinsic values bears almost no relation to variations in levels of job security and material prosperity in this population, for whom intrinsic values are of great relevance

Keywords: typology of professional situations; transition to work; structural inequalities; work orientations.

Uma tipologia de situações profissionais na análise da transição ao trabalho de diplomados do ensino superior

Resumo

Apresenta-se neste artigo uma tipologia de inserção profissional dos diplomados do ensino superior português, utilizada na análise i) da distribuição desigual dos indivíduos na estrutura ocupacional e ii) da relação entre as posições dos graduados na estrutura ocupacional e as orientações para o trabalho. Concluise que o ensino superior continua a ser permeado por lógicas de reprodução das desigualdades que vão para além dele e que, entre os seus diplomados, são os valores intrínsecos os de maior relevância, sendo que a importância por eles atribuída aos valores associados ao trabalho quase não tem relação com os níveis de segurança no emprego e a sua prosperidade.

Palavras-chave: desigualdades estruturais; tipologia de situações profissionais; transição para o trabalho; valores do trabalho.

Une typologie des situations professionnelles dans l'analyse de la transition vers le travail des diplômés de l'enseignement supérieur

Résumé

Cet article se concentre sur le cas portugais pour discuter l'insertion de l'emploi des diplômés. Il présente une typologie de insertion professionelle qui a été utilisé pour analiser i) la répartition inégale des individus dans la structure de l'occupation, et ii) la relation entre les positions des diplômés dans la structure professionnelle et les orientations du travail. On conclude que l'enseignement supérieur continue imprégné par des logiques de reproduction des inégalités, et que l'importance des valeurs intrinsèques et extrinsèques porte presque aucun rapport avec des variations dans les niveaux de sécurité de l'emploi et la prospérité matérielle dans cette population, pour qui les valeurs intrinsèques sont les plus importants.

Mots-clés: inegalités structurelles; typologie des situation professionelles; transition vers le travail; valeurs du travaix

Una tipología de situaciones profesionales en el análisis de la transición hacia el trabajo de los graduados de educación superior

Resumen

Se presenta en este artículo una tipología de inserción profesional de los graduados portugueses, que se utilizó en el análisis i) de la distribución desigual de los individuos en la estructura ocupacional y ii) de la relación entre las posiciones de los graduados en la estructura ocupacional y las directrices para el trabajo. Se concluye que la educación superior sigue siendo penetrado por la lógica de la reproducción de las desigualdades; que, entre los graduados, son los valores intrínsecos los de mayor relevância; y que la importancia dada a los valores asociados con el trabajo no tiene casi ninguna relación con los niveles de seguridad en el empleo y la prosperidad.

Palabras-clave: Tipología de situaciones profesionales; transición al trabajo; desigualdades estructurales; valores del trabajo.

Introduction

The pioneer surveys studying graduate labor market insertion from the 1970s onwards in countries like the United Kingdom, Japan and France have been increasingly used by courses, faculties, universities and countries, and in some cases given rise to regular statistical data collection that has allowed the evolution of employability to be monitored over time (Schomburg and Teichler, 2006, 2011; Teichler, 2007; Mora, 2008; Allen and van der Velden, 2007; Giret 2000; Giret *et al.* 2005; Purcell *et al.*, 2005; Borden, 2003; Bradburn *et al.*, 2006; Finnie, 2000, 2004; Coates and Edwards, 2011).

If it can be said that there is one central theme to these surveys, it is the attempt to characterize *the professional situations of the graduates*. We argue that the centrality of this objective, coupled with the increasing heterogeneity of labor market insertion scenarios, confronts us with a growing need to produce synthesis variables, i.e. to create typologies that can coherently cluster and summarize scattered data in a broad set of indicators about work situations (Schnapper, 2000). There are two advantages to these typologies. On one hand, they can identify and contrast the methods of labor market insertion used by young graduates; and on the other, they provide analyses of sociologically relevant matters which would otherwise be difficult to make.

We intend with this article to present a typology of professional situations produced within the scope of a recent study conducted on Portuguese graduate, and at the same time to show that its heuristic potential was decisive in the response to two key questions of the research. Firstly, it aimed to examine whether the graduates' position in the occupational structure continued to be strongly conditioned by the resources associated to their social origins, despite the levelling effect of school socialization and their university degree. Secondly, it sought to analyze the extent to which the position the graduates held in the occupational structure is predictive of their work orientations.

In pursuing this goal, the article will also document the labor market situation of a significant set of Portuguese graduates 6 months before the deterioration in the financial and economic crisis triggered Portugal's request for external assistance. It should be noted that between the date of the survey – 4th quarter of 2010 – and the 1st quarter of 2013, the unemployment rate of graduates aged between 25 and 34 years, that of the majority of respondents, rose from 11.8% to 20.3%¹.

Data from Statistics Portugal: http://www.ine.pt/xportal/xmain?xpgid=ine_main&xpid=INE&xlang=en.

1. Some reflections on the professional situations of Portuguese graduates

It should be underlined that only one national survey on the graduate population has ever been conducted in Portugal, namely that of Sistema de Observação de Percursos de Inserção dos Diplomados de Ensino Superior (Observation System of Insertion Tracks of Higher Education Graduates) (ODES). This study focused specifically on the cohort graduates from the 1994/95 academic year with the aim of reconstituting their career paths in the five years following graduation (ODES, 2000, 2002). Since that time, for absence of political and inter-university guidelines, in part because of financial constraints, the surveys have been conducted solely by higher education establishments²; the indicators and methods used are distinct from those of their counterparts which makes the cumulative treatment and comparison of information impossible. This study is not an exception, as it focused in a restricted population of graduates. Yet, it was possible to create the institutional and scientific conditions necessary for the gathering of graduates' population from two public universities - Universidade de Lisboa and Universidade Nova de Lisboa. These circumstances allowed the use of an empirical universe much larger than that of other studies of this kind in Portugal, although it covered no more than 17% of all graduates from Portuguese public universities in 2004/05 or 11% if private universities are included

The researchers involved in this study aimed to design and test a questionnaire that could be applied at national level. The aggregation of these two universities also enhanced the heterogeneity of the population according to the area of education and training, and thus assess the potential impact of this variable on professional transition, along with others, such as gender and social background. In this article, we will only explore the explanatory impact of social background on professional transition, while neutralizing the effect of the educational area, since this may contribute indirectly to this effect. It is also important to notice that, according to the hypotheses this study, we did not considered relevant to analyse the differences between the two universities, decision that was reinforced by preliminary data analysis that showed no statistically significant differences.

Three aspects distinguish this study from others conducted in Portugal on the professional situations of graduates, focused in isolated universities or other higher education institutions³. Firstly, it is based on a statistically representative sample; secondly,

² On this, see the compilation by Marques and Alves (2010) of the institutional (university and polytechnic) studies on the labor market insertion of Portuguese graduates.

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it used the official national indicators of INE (Portuguese Statistics) and EUROSTAT, in addition to others from the CHEERS and REFLEX projects, thus allowing comparisons between the population under analysis and other wider populations.

2. Methodology

From an extensive approach, this article aims to resume a typology of professional situations presented previously (Ramos, Parente e Santos, 2014), using it hereafter as an independent variable in order to analyse the relationship between the graduates' positions in the occupational structure and the work orientations.

The subjects are a random sample of 1004 graduates from two of the largest Portuguese universities, the *Universidade de Lisboa* and the *Universidade Nova de Lisboa*, who completed their degree in the 2004/05 academic year (from a universe of 4290 graduates, 2560 are from UL and 1730 from UNL). The sample is statistically representative of the universe, with a maximum estimated error of 2.71% for a 95% confidence level.

The sample comprises 64.3% women. The average age is 31. The predominant education areas of the graduates are Arts and Humanities (21.4%), Health (12.7%), Physics (12.0%), Education (10.0%), Law (9.7%), Life Sciences (8.6%), Journalism and Social Sciences (7.7%), Economics and Management (6.7%), Mathematics, Statistics and Computer Sciences (6.5%) and Engineering, Construction and Manufacturing Industries (4.9%). A structured questionnaire was administered using a phone survey between November 2010 and January 2011.

Five indicators of particular relevance to the analysis of the relationship between education and employment and to the identification of the graduates' positioning in the labor market were selected to characterize the graduates' professional situation (Table 1), given special attention to issues such as overqualification or professional downgrading, the spread of flexibility and atypical contractual relations, level of stability of employment situations, underemployment and the economic return from attending higher education: the *professional Group*, the *employment situation*, the *type of work contract*, the *number of hours worked weekly and* the *monthly average net wage*

Table 1 summarizes the distribution of the sample for each of the indicators constituting the typology of professional situations⁴.

⁴ For a more detailed description of the construction of this typology see a previous work from the authors (Ramos, Parente e Santos, 2014).

Table 1
Indicators used in the analysis of professional situation

	Indicators	N	%
Occupational	Armed Forces Occupations	6	0.7
group ^a	Managers	69	7.9
	Professionals	562	64.2
	Technicians and Associate Professionals	133	15.2
	Clerical support workers	67	7.6
	Service and Sales Workers	36	4.1
	Craft and Related Trades Workers	1	0.1
	Plant and Machine Operators and Assemblers	2	0.2
	Total	876°	100.0
Employment	Self-employed with employees	23	2.7
situation	Self-employed without employees	67	7.9
	Employees	753	89.3
	Total	843°	100.0
Type of contract	Open ended contract	408	47.7
	Fixed term contract	288	33.6
	Provision of services and temporary work contract	38	4.4
	No contract	122	14.3
	Total	856 °	100.0
Weekly working	Up to 16hrs	43	5.2
hours	17-34hrs	194	23.6
	35-40hrs	316	38.4
	Over 40hrs	270	32.8
	Total	823 °	100.0
Average monthly net wage ^b	Less than €310	7	0.8
	€310 to less than €600	40	4.8
	€600 to less than €900	111	13.4
	€900 to less than €1200	248	30.0
	€1200 to less than €1800	288	34.9
	€1800 to less than €2500	91	11.0
	€2500 to less than €3000	21	2.5
	€3000 or more	20	2.4
	Total	826°	100.0

^a According to the National Classification of Occupations (2010). ^b Average monthly net wage calculated according to the income ranges proposed by INE for 2010. ^c Differences in totals are due to missing data in the various indicators.

Source: Ramos, Parente e Santos (2014).

Using these indicators, the typology of professional situations was built from a Multiple Correspondence Analysis (MCA), which allowed identifying the existence of groups with different profiles, followed by a cluster analysis as proposed by Carvalho (2008).

Posteriorly, in order to study the heuristic potential of the typology, we first analyze the unequal distribution of individuals in the occupation structure by using a mediation model, where "education areas" mediate the effect of "socio-economic status of origin" and "parental education" on the graduates' professional situations (types of professional situations as a dependent variable). Baron and Kenny's three-step procedure was used for this purpose (Baron and Kenny, 1986). All the procedures were made by using Categorical Regressions (via optimal scaling), also known by the acronym CATREG, since the outcome variable was categorical.

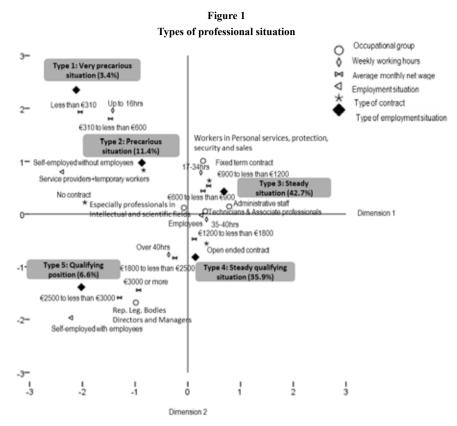
Aiming to analyze the relationship between the graduates' positions in the occupational structure and the work orientations (typology as an independent variable), a multivariate analysis of variance (MANOVA) was used to determine whether the average values differed significantly in line with the type of professional situation.

3. A typology of professional situations

Following the description of the professional situations using data from a univariate descriptive analysis, we turn to a multivariate analysis to identify the presence of different patterns in order to create a typology of professional situations. A Multiple Correspondence Analysis (MCA) followed by a Cluster analysis allowed us to obtain a typology of professional situations⁵. Figure 1 presents the projection of the groups formed in the map of the MCA.

Closer scrutiny of the typology allows us to conclude that the five types of professional situations were profiled in a hierarchical continuum, from the most vulnerable and precarious to the most qualifying and capitalized in terms of the indicators under analysis; they were attributed the following designations: very precarious situation; precarious situation; steady position; steady qualifying position and high qualifying position. Although the notion of precariousness is essentially associated to contractual instability, the concept acquires a broader meaning here and transmits the idea of fragility in other dimensions of the working experience (Paugam, 2006, 2007; Rebelo, 2004). This semantic extension is currently justified as the standard labor relationship among Portuguese youth is moving increasingly away from that of a stable contractual situation.

⁵ For a more detailed description of the construction of this typology see Ramos, Parente e Santos (2014).



Source: Ramos, Parente e Santos (2014).

Group 1, designated *very precarious situation*, is the smallest (3.4%). It has the highest percentage of workers without organizational links, overqualified, working part-time and severely underpaid. There is a predominance of no contracts (50.0%) and, though with less weight, fixed term contracts (30.8%). It is associated with low weekly working hours, less than 17 hours (76.9%) and low wages (88.4% earn less than 600 Euros). A higher proportion of individuals are in occupations that are a mismatch with their educational level in this group than the subsequent groups. For example, the number of workers in personal services, protection and security or in sales goes up to 11.5%, nearly three times higher than for the whole sample (4.1%).

The second type, denominated *precarious situation*, has similar characteristics to the previous group although their wage levels and working hours indicate less vulnerability. Nevertheless, the professional situation is fragile because it is characterized by work without any affiliation or organizational link: 41.4% have no

contract, 26.4% have a fixed term contract and 20.7% have a provision of services contract or are on a temporary work company. It should also be noted that 34.5% are self-employed with no employees. When observing weekly working hours, we find situations of part-time work like the previous group, but here they have longer hours as only 16.1% work less than 17 hours. As for wages, 60% are in the 600 to 1200 euro group. Again, we find a greater weight of over-qualification given that 17.2% are distributed between "Clerical Support Workers" and "Service and Sales Workers".

From type 3, we start to see a steady advance in the quality of employment with a marked improvement in professional situations 4 and 5.

Type 3, termed *steady situation*, is the largest group. All the graduates in this group have a contractual tie with an organization; 47.4% do a full working week (between 35 and 40 hours), have fixed term contracts (57.5%) or open-ended contracts (40.9%). The category approaches the Fordist wage regime and the monopolistic regulation regime (Boyer 1986) which gained expression in the USA after the crisis decade of the 1930s, and in Western Europe after the Second World War; it is a model grounded on scenarios of growth and economic stability. It should be noted that 86% of the graduates in this group earn a monthly net wage of 900 euros or more (53.2% earn up to 1200 euros and 22.5% between 1200 and 1800 euros). However, a considerable percentage of graduates in this group work in a situation of overqualification (22.2%), and belong to the "Clerical support workers".

A steady qualifying situation characterizes type 4. All of the graduates is this group are employees. This type is distinct from type 3 due to greater job stability, higher wages, and excessive working hours, and it also enjoys more "favorable" conditions in terms of material and symbolic capitalization, hence the adjective "qualifying". This is demonstrated by the fact that 58.6% earn between 1200 and 1800 euros and 23.4% between 1800 and 2500 euros; moreover, 78.4% have an open-ended contract. In terms of occupational groups, the "Professionals" are the majority (66.7%), but "Managers" (14.3%) and "Technicians and associate professionals" (16.5%) are also of some relevance.

Lastly, type 5 is designated *high qualifying position* as it is made up of employees in the public administration or entrepreneurs who belong to occupational groups that match their training level, in a situation of over-employment and high wage levels both in relation to the universe under analysis and the Portuguese population as a whole: 42.0% earn a net wage of over 2500 euros and 78.0% work more than 40 hours a week. It is by far the group with the largest proportion of "Managers" (44.0%) which is reflected in the lower weight here of "Professionals" (52.0%), even though

the latter continue to be in the majority. As for the employment situation, we observe a very balanced distribution between self-employed with employees (38.0%) and employees (34.0%). Indeed, this is the only group in which self-employed individuals with employees is of a significant size. Curiously, the number of individuals without a work contract is greater in this group (64%) vis-à-vis those with a contractual link. Nevertheless, unlike in Group 1, the situations of no contract do not reflect forms of precarious employment but are characteristic of entrepreneurs, consultants, legal experts (notably lawyers) who not only earn significantly higher than average wages, but also have good job perspectives and even rotate between companies and public entities.

The five groups comprise individuals who are in the labor market; the group of unemployed was included in the typology, *a posteriori*, and took the most precarious position in the *continuum* in the analysis presented below. This group corresponds to 3.1% of the total.

4. The heuristic potential of the typology: two examples

4.1. The study of the unequal distribution of individuals in the occupation structure

Our aim in this section is to provide evidence of the central role played by the typology when examining two important topics in the study of the employment insertion of graduates, both of which addressed in the project that supports this article (Ramos, Parente e Santos, 2014; Chaves, Ramos e Santos, 2016).

The first is the evaluation of the level of persistence vis-à-vis the mitigation of the reproduction logic of social inequalities at the moment of the graduates' transition to the occupational structure. This topic has been addressed from various perspectives in international studies (e.g. Hout, 1988; Torche, 2011; Bernardi, 2012; Bukodi and Goldthorpe, 2011; Mastekaasa, 2011; Opheim, 2007; Triventi, 2011), but has been given little attention by Portuguese social scientists. Although they have analyzed the unequal distribution of students from different social origins within the higher education system (Chave, 2010; Alves, Alves e Chaves, 2012; Cruz and Cruzeiro, 1995; Balsa *et al.*, 2001) and within training areas (Almeida *et al.*, 2003), focus has rarely been given to the moment they enter the labor market.

Within the scope of the first topic, we formulated two questions that we sought to respond by mobilizing the typology of professional situations as a dependent variable. First, we wanted to know if unequal social origins were significantly related with the positions the graduates were able to achieve in the occupational structure.

Second, we asked whether the universities worked as mechanisms to mitigate these inequalities (social leveling) by allowing individuals from unequal positions in the social structure to access contiguous positions in the occupational structure as long as they obtain the same degrees or, at least, degrees in the same education area.

We constructed the mediation model in Figure 2 with the aim of answering these questions. It allows us to assess the effect of the resources associated to social origins—"socio-economic status of origin" and "parental education"—in the graduates' distribution in the typology and, simultaneously, test whether the explanatory relevance of these factors remains when mediated by the "education area".

Father's schooling

Mother's schooling

Education area

Type of professional situation

Status of the occupational group of origin

Our observations, based on these same data, allowed us to conclude that the training areas have considerable explanatory potential in the graduates' distribution in the typology. Furthermore, two studies conducted in Portugal (Almeida *et al.*, 2003; Balsa *et al.*, 2001) showed that graduates from different social origins were unevenly distributed across the different training areas on completing high school, and entering higher education. The areas that facilitated access to qualifying professional positions tended to be occupied by individuals from higher socio-professional statuses and with more cultural capital.

We measured parental education as the number of completed years of schooling corresponding to the highest level of education obtained. The occupational group status of the family of origin was defined by crossing the information on the father and mother's occupational groups according to the National Classification of Occupations 2008, harmonized with the International Standard Classification of Occupations' (ISCO-08) in which groups 1 (Managers), 2 (Professionals) and 3 (Technicians and Associate Professionals) were each defined as a rank with all other occupation groups

lumped together as rank 4 and lower. From this, we obtained four ranks (from A, the highest, to D, the lowest). Whenever information was missing for one of the parents (19 missing in both cases), we imputed that of the other parent to reduce the number of missing cases⁶. On the other hand, the training areas were based on the National Classification of Education and Training Areas (CNAEF), but adapted to consider the type of curricular offer of the two universities under analysis, Universidade de Lisboa and Universidade Nova de Lisboa. As a result, 10 education areas were obtained: Arts and Humanities, Health, Physics, Education, Law, Life Sciences, Journalism and Social Sciences, Economics and Management, Mathematics, Statistics and Computer Sciences and Engineering, Construction and Manufacturing Industries.

In order to test the mediation model (Figure 2), we followed Baron and Kenny's three-step procedure. In step 1 the mediator variable is regressed on the predicting variables: regression coefficients for predictors should be statistically significant; in step 2 the outcome (or dependent) variable is regressed on the predicting variables: regression coefficients should be statistically significant; finally, in step 3, the outcome variable is regressed on the mediator and predictor variables: if mediation exists, the coefficient regression for the mediator should be statistically significant, and the effect of the predictors on the outcome decreases to zero (full or complete mediation) or decreases by a nontrivial amount but remains significant (partial mediation).

Table 2 reports the results of step 1 of Baron and Kenny's procedure. Statistically significant relationships of the occupational group status of origin (b=0.140, p<0.05) and the mother's education level (b=0.171, p<0.05) were found when education areas were regressed on the predictor variables.

Table 2
Regression analysis of the mediator on predictor variables

Variables	b	F	df
Years of schooling of father	0.027		
Years of schooling of mother	0.171*		
Status of occupational group of origin	-0.140*		
Adj. R ²	0.079**	21.140	4,939

^{*}p<0.05 ** p<0.001

⁶ For a more detailed description of the construction of this variable see Chaves, Ramos e Santos (2016).

Table 3 shows steps 2 (first-half) and 3 (second half) of the mediation test. The results allowed us to conclude that the education area mediates the effect of the family's socio-economic status in explaining the variation of the types of professional situations (b=0.472, p<0.001).

In the top half of table 3, we observe that the social origins assume a predictive effect in the individuals' positioning in the typology. However, it is not a strong effect and only becomes marked in the case of the status of the occupational group of origin (b=-0.152, p<0.001). The education levels of the family of origin do not have any explanatory power at this level (p>0.05).

Table 3
Regression analysis of the types of professional situations on the predictors and the mediator variables

Variables	b	R ² part*100	Adj. R ²	F	df
Years of schooling of father	0.005	0.09			
Years of schooling of mother	0.079	0.25			
Status of occupational group of origin	-0.152**	1.72			
			0.037**	8.059	4, 733
Years of schooling of father	-0.020	0.02			
Years of schooling of mother	0.043	0.07			
Status of occupational group of origin	-0.084*	0.52			
Education area	0.472**	21.1			
			0.241*	20.484	12,725

^{*}p<0.05 ** p<0.001

On observing the bottom half of this table, we find that the education area assumes a clearly predictive predominance over all other variables considered, explaining *per se* roughly 21% of the graduates' positioning in the typology (R^2 part=0.211). However, given the research questions, the most important data to highlight is undoubtedly the reduction of the weight of the status of the occupational group of origin as soon as the education area was introduced in the model (b goes from -0.152 to -0.084). This clearly shows that although the social origins already had little direct impact in the typology, it was reduced even further when mediated by the education area. The indirect effect of the status of the occupational group of origin (mediated by the training area), according to the Sobel test, was significant (Sobel Z= -3.45, p<0.001).

Thus, in response to the first question, it can be concluded that the social origins

are reflected in the positioning of individuals in the labor market. This conclusion is similar to most of the analyses conducted on the inequalities of employment insertion in European countries (e.g. Ballarino et al., 2013; Bernardi 2012; Bukodi and Goldthorpe, 2011; Erikson and Jonsson, 1998; Hansen, 2001; Mastekaasa, 2011; Zella, 2010); to varying degrees, these all report the impact of social origin on the insertion pathway even among graduates. In our analysis, the effect of social origins is not only low but occurs to a great extent through the training areas; in other words, because individuals of different social origins were distributed unequally across the various education areas before the start of their academic life.

These findings already indicate an answer to the second question. The low direct explanatory power of social origin gives strong support to the hypothesis that graduates of different social origins, who trained in similar areas, tend to share comparable positions in the labor market; in other words, the social leveling at universities resulting from academic socialization and having similar degrees is apparent and works as a mediator of the reproduction logic of social inequalities in graduates' transition to the labor market.

As we emphasized in a previous paper (Ramos, Parente e Santos, 2014), the period of the analysis may be a constraint for these results. In recent decades, Portuguese society has enjoyed a phenomenon of structural mobility which has led to the growing weight of Professionals and Technicians and Associate Professionals in the occupational structure. It is possible that the weakening of the structural mobility process resulting from the economic and financial crisis may be reflected in the strengthening of resources associated to social origin in the access to qualifying positions, even in the two universities under analysis, and thus upsetting the leveling effect to which we have just referred. The boosting of the role of social origin in the distribution of graduates in the social structure could, we believe, result fundamentally from two factors: on one hand, the increasing importance of the differentiation of family social capital in a context where job opportunities are more scarce; on the other, the widening gap in the access to post-graduate training as individuals from social backgrounds with less capital can no longer support the cost. In fact, the fees for masters and doctoral programs in Portugal are considerably higher than for graduation. Like Bernardi (2012), we would suggest that the importance of social origin in professional situations may differ in intensity over time, sometimes declining and others rising.

4.2. The typology in the study of work orientations

A second topic in which the typology was of the utmost importance, this time as an independent variable, was the relationship between the graduates' positions in the occupational structure and the work orientations, specifically for the analysis of the importance of the former in shaping the latter.

In line with authors like Herzberg *et al.* (1959) or Rosenberg (1957), we systemized and operationalized work orientations using the concept of work values, that can be defined as "beliefs about the desirability of various work features and are usually defined by referencing several types of rewards derived from working" (Johnson, 2001a, p.317).

From the various existing typologies of work values (Dawis and Lofquist, 1984; Kasser and Ryan, 1996; Ryan and Deci, 2000; Harding and Hikspoors, 1995; Herzog, 1982; Marini *et al.*, 1996; Miller *et al.*, 2002; Johnson, 2002), we selected the one that supports the questionnaire of the *International Social Survey Programme* (ISSP) (Cabral *et al.*, 2000). This was due essentially to the need to limit the administration time of the questionnaire to the graduates. While on one hand we believe that the set of indicators used in the other typologies, like that of Johnson (2002) or Marini *et al.* (1996), is very sophisticated and detailed, on the other it is excessively long. This is a constraint in surveys that intend to address various topics using the telephone, as in our case. Moreover, the ISSP typology is being used in Portugal and other European countries (Cabral *et al.*, 2000), which thus means other larger populations can be compared with ours.

Despite the range of work values (e.g. extrinsic, intrinsic, altruistic, social and leisure), our analysis focuses only on the *intrinsic and extrinsic values*. While we acknowledge that distinguishing between intrinsic and extrinsic values is not in itself sufficient to explain the diversity of aspects that individuals value and seek through or at work, we believe it allows us to link together the majority and most significant aspects. The former refer to the importance individuals attribute to the rewards obtained from the nature of the work *per se* (e.g., opportunity to express one's interests and abilities). The extrinsic orientations refer to the importance individuals give to the consequences arising from the fact that they work (e.g., pay), or to their working conditions (e.g., security, prospects for promotion, pleasant working environment) irrespective of the kind of work (Johnson and Mortimer, 2011).

We added two further indicators to those of ISSP: "a job that allows me to be financially autonomous from my parents" and "a job that allows me to acquire new

knowledge". The first of these falls into the category of extrinsic orientations and reflects the importance of remuneration for labor, but placing it at a considerably lower expectation level than the item "a job that enables me to earn high wages". In turn, the indicator "a job that allows me to acquire new knowledge" reflects an intrinsic orientation; according to previous studies (Chaves, 2010), it is crucial when considering whether an occupation has positive qualities inherent to the work done, at least for individuals with a high level of education. Participants were asked to rate the importance of each of these features independently when assessing a job on a tenpoint scale (1=totally disagree; 10=totally agree).

In analytical terms, we depart from the more or less explicit hypothesis in previous studies (Kilpatrick et al., 1964; Kohn, 1969; Gurin et al., 1960; Centers and Bugental, 1966; Kohn and Schooler, 1983; Harry, 1975; Kalleberg and Stark, 1993) that professional situations offering greater security and material prosperity are positively correlated with intrinsic values and negatively correlated with extrinsic values. This hypothesis stems from a tradition based on the postulates advanced by Maslow (1954). The Maslowian theses have been subjected to empirical tests on various occasions (Mortimer and Lorence, 1979; Flanagan et al., 1974; Tay and Diener, 2011; Wahba and Bridwell, 1976), and continue to be a part of contemporary sociological research. They have been developed in particular in contemporary studies coordinated by R. Ingleheart on the relationship between socio-economic change and the change in values. In fact, Ingleheart's studies are essentially based on the scarcity hypothesis. This hypothesis is generally used in the reflection on international values but can also be used to ponder on the differences found within a society (Inglehart and Welzel, 2005), "as the basic economic and physical security of individuals is met, values reflecting these needs are given a lower priority in relation to other, conflicting values" (Knutsen, 1990: 85-86). It is not difficult to anticipate the possibilities of convergence between this kind of thesis and the question of work values. Authors like Mortimer and Lorence (1979: 1362) specify them for example on stating: "when the individual has inadequate economic resources, income and the other extrinsic benefits of work assume the highest priority. When material needs are satisfied, the salience of extrinsic rewards decreases as the worker's attention turns to other, more intrinsic job satisfactions".

The hypothesis we advance was tested by comparing the average importance given to work values by the individuals in the different types of professional situation. We considered the following items as indicators of intrinsic values: "an interesting job"; "a job that allows me to acquire new knowledge" and "a job that allows

autonomy"; indicators of extrinsic values are: "a secure and stable job"; "a job that allows me to earn high wages"; "opportunities for professional development" and "a job that allows me to be financially autonomous from my parents".

A multivariate analysis of variance (MANOVA) was used to determine whether the average values differed significantly in line with the type of professional situation.

In the case of intrinsic values, for which the average values range between 8.6 and 9.2, the MANOVA allowed us to conclude that the type of professional situation has a significant but very small effect on the variation of work values. (Wilks' Lambda=0.938, F(6, 1554)=2.154, p=0.039, $\eta_p^2=0.008$). Having observed the multivariate significance of the "types of professional situation" factor, the univariate ANOVA allowed us to conclude that the effect is only statistically significant in the cases of "a job that allows me to acquire new knowledge" (F(2,779)=3.874, p=0.021, $\eta_p^2=0.010$) and "a job that allows autonomy" F(2,779)=3.776; p=0.023; $\eta_p^2=0.010$).

According to *post-hoc* Games-Howell tests, the graduates in the extreme types of professional situation, i.e., the ones in the most fragile situations (unemployed+type1+type2) and those in the most favorable situations (type4+type5)⁷ differ in the importance given to the item "a job that allows me to acquire new knowledge" (p=0.016), with the former giving it more importance. As for the item "a job that allows autonomy", the graduates in the most fragile professional situation differ significantly from both the intermediate group (p=0.030), and the most comfortable group (p=0.026). Again, it is the most fragile group that gives the greatest importance to this work value.

In the case of the *extrinsic values*, for which the average ranges between 7.7 and 9.4, the MANOVA indicated that the type of professional situation has a significant effect on the variation in work values when considered together, but it was again very small (Wilks' Lambda=0.983, F(6, 1552)=2.228, p=0.038, η^2_p =0.009). However, having observed the multivariate significance of the types of professional situation, the univariate tests aimed at identifying the work value(s) in which differences were registered did not produce significant results (p>0.05). Although not a frequent situation, it can occur as multivariate tests working with more information about the dependent variables (correlations) can reveal differences that do not show up in the separate univariate tests for each dependent variable.

The findings from the tests allow us to conclude that, in this population,

⁷ To perform the MANOVA, and to obtain a balanced size of groups, the types of employment situation were clustered equally in just 3 types corresponding to the most fragile situation (unemployed+type1+type 2), the intermediate situation (type3) and the most favorable employment situation (type4+type5).

the position in the occupational structure has very little influence on the relevance given to the different work values. To be more precise, contrary to the hypothesis advanced, it is the graduates in the most insecure and capitalized positions that show a slightly greater tendency to valorize the intrinsic values. This is compounded by another previous finding, namely that greater relevance is attributed to all of the intrinsic rewards, both overall and to each individually, than to the extrinsic benefits. For this, it is simply necessary to compare the average scores obtained by the items "an interesting job" (9.0), "a job that allows me to acquire new knowledge" (8.9) and "a job that allows autonomy" (8.7) with those of the items "opportunities for professional development" (8.4), "a job that allows me to earn high wages" (7.8) and "a secure and stable job" (8.5). The only exception to this is the importance given to "a job that allows me to be financially autonomous from my parents" (9.2), which is on average higher than the score of any other extrinsic and intrinsic value (and has the lowest dispersion)⁸.

With this exception, the observation that the importance given to the intrinsic values was not only greater than that of extrinsic values but that it does not appear to oscillate right through the typology confronts us with a sociological enigma - how can the valorization levels of intrinsic work rewards cut across this population of graduates in such a way that their variation seems to be unaffected by their unequal positioning in the occupational structure and, therefore, by the change in some of the most important material living conditions?

Although the answer to this question is clearly beyond the scope of this article, and already examined in another text (Chaves, Ramos e Santos, 2016), we would like to stress some aspects.

First of all, highlight the importance of two expanding features of the century-long process of individuation - the idea that individuals should be governed by the search for "self-fulfillment" and the belief that this self-fulfillment cannot be achieved on the fringes of "authenticity" (Giddens, 1991; Bauman 2008)); secondly, the progressive weakening of an ascetic ethic that involves renunciation and sacrifice (Bauman, 2004, 2008; Lipovestsky, 1992, Bourdieu, 1979). We argued that these two

⁸ For the purpose of the study, the item "a job that permits financial autonomy from my parents" is an extrinsic reward which, like the item "high remuneration" (the least valued in our sample), is focused on the remuneratory aspects of having a job. However, the wage scale is fixed in this case at a level that is not necessarily "high". Individuals should only have the possibility to depend on their families for expenses they consider important or indispensable. This result also strengthens the hypothesis we already formulated on another matter (Chaves, 2010), that despite the turbulence and complexification of the process of transition to adulthood, self-sufficiency remains a nuclear vector in how individuals envision these dynamics, as well as in the very social reproduction process of contemporary societies.

types of marked cultural transformations are nowadays expressed in the work sphere "in the praise of a job that can provide intrinsic rewards, and in the subjective rejection of working activities which, now or in the long term, will not allow them to fulfill this kind of goal" (Chaves, Ramos e Santos, 2016).

The pertinence and suitability of these interpretations will be examined through the 40 in-depth interviews lately conducted. Through this new qualitative *corpus* we will try to determine whether the importance given to the extrinsic and intrinsic values has changed in any way, during this time that Portugal and other Southern European countries have been immersed in a severe financial and economic crisis, one that has given rise to soaring unemployment rates, contractual instability and lower wages affecting the young population in particular and notably the more highly qualified.

5. Conclusion

This article is part of a set of studies on the insertion of graduates in the labor market, using surveys as their chief data collection technique. Its main objective was to contribute to enhancing the scope of these surveys, not only in the study of the transition to work, but also in the analysis of sociological problems that hold important affinities with the latter.

We argue that one of the ways of contributing to this objective is by increasing the importance attributed to the construction of typologies of professional situations and professional paths, and fostering their methodological and analytical development. Formed from a set of core values that characterize the position or trajectories of individuals in the occupational structure, these typologies permit the definition of classifications that regroup complex and disparate realities into a limited number of representative situations, highlighting the statistical regularities of situations or pathways (Giret, 2000).

The typological construction that we tested in this article began by mobilizing five variables inspired on different proposals of regulation theory, for the analysis of the wage relation (Boyer, 1986; Hall and Soskice, 2001; Gourevitch and Hawe, 2001), in the context of the generalized trend towards flexibilization of human resources in western economies, namely "professional qualification", "employment situation", "remuneration", "contract" and "weekly working hours".

We test the heuristic potential of the typology of professional situation, both as a dependent and independent variable, in response to two questions. Firstly, to what extent the social origin of the graduates explains their unequal distribution within the occupational structure, and can the academic path lead to social leveling by allowing individuals who trained in the same scientific area to reach similar positions in the labor market? Secondly, are different types of professional situation good predictors of the graduates' value orientations in relation to employment? Bearing in mind that the locus of analysis is situated at the moment of the graduates' transition to work, we must recognize that the subject has received little attention internationally and is almost unheard of in Portugal.

In response to the first question, it was concluded that although higher education is known to be a social leveler, it continues to be permeated by reproduction logics of inequalities that go beyond it and, to use the Bourdieuan formulation (Bourdieu and Passeron, 1964, 1970), help legitimize it insofar as they help convert social inequalities into schooling inequalities. This effect was largely due to the fact that individuals from distinct positions in the social structure tend to be distributed differently across the various training areas. It can be said that these dynamics – leveling and reproducers of inequalities – essentially share the same mediator, i.e., training areas.

In the second question, in an evaluative scenario characterized by a predominance of intrinsic over extrinsic orientations, it was clear that the importance of intrinsic and extrinsic values bears almost no relation to variations in levels of job security and material prosperity in this population. These observations allowed us to advance hypotheses in answer to the following question: why is the variation in the importance of intrinsic values uncorrelated to differences in some of the most important material living conditions?

It is true that the results obtained relate to the period immediately prior to a severe decline in the financial, economic and employment situation that accompanied and followed the request for a bailout made by the Portuguese government and by other southern European countries to the three international lending institutions (IMF, European Commission and European Central Bank). The resulting typology and conclusions will be used again in the future, ideally through a survey that covers the entire Portuguese higher education system.

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Appendix Education areas by type of professional situations

	Type 1 (0+1+2)		Type 2 (=3)		Type 3 (4+5)	
	N	%	N	%	N	%
Education	21	15.3	58	17.8	5	1.5
Arts and Humanities	50	36.5	92	28.3	35	10.8
Social Sciences and Journalism	11	8.0	31	9.5	19	5.9
Economics and Management	0	.0	10	3.1	48	14.9
Law	18	13.1	12	3.7	49	15.2
Life Sciences	8	5.8	27	8.3	22	6.8
Physics	13	9.5	44	13.5	25	7.7
Mathematics, Statistics and Computer Sciences	3	2.2	16	4.9	32	9.9
Engineering, Construction and Manufacturing Industries	5	3.6	9	2.8	29	9.0
Health	8	5.8	26	8.0	59	18.3
Total	137	100.0	325	100.0	323	100.0