THE FUNCTION OF SUBJECTIVE UTILITY AS AN INDICATOR OF JOB SATISFACTION

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The aim of this paper is to obtain a set of utility functions to allow a prognosis of the level of general satisfaction achieved by subjects admitted to the vocational programmes of the "Escuelas Taller y Casa de Oficios" (Workshop Schools and Vocational Centres) sponsored by the National Institute of Employment (INEM). Five hundred subjects from the province of Cádiz were administered a short version of Fernández Seara's (1987) original questionnaire. They were asked to rate their general level of satisfaction on a scale of 10 points. Utility functions were constructed according to the results.

El objetivo del trabajo ha sido la construcción de una serie de funciones de utilidad que permitan pronosticar el nivel de satisfacción general que alcanzarán los sujetos que acceden a los programas de Escuelas Taller y Casas de Oficios, de formación ocupacional, patrocinados por el Instituto Nacional de Empleo (INEM). Para ello, se ha utilizado una muestra de sujetos de la provincia de Cádiz, que habían accedido a este tipo de programas, y se les aplicó el cuestionario MPS de Fernández Seara (1987), en su versión original y en una versión abreviada, y se les pidió que emitieran un juicio, en una escala del 1-10, acerca del nivel de satisfacción (NSG) alcanzado. Con los datos obtenidos se construyeron las distintas funciones de utilidad.

INTRODUCTION

This work forms part of a line of research aimed at the study of job satisfaction and the design of instruments and indicators to measure it, the objective being to facilitate decision-making in the personnel selection process for all activities within the framework of the Occupational Training Programmes.

The work is based on the assumptions of Behavioural Decision Theory, and particularly its perspective on choice under risk and uncertainty, since subjects on this type of programme select a particular course or speciality only on the basis of its name, without more information. Also, staff recruitment processes usually become decisions made under risk conditions, given that there is no empirical evidence as to whether the candidates chosen are the most suitable. This is particularly true when using procedures such as the interview, in which subjective aspects have significant influence.

An initial review of the field of Behavioural Decision Theory (Slovic, 1972; Slovic, Fischhoff and Lichtenstein, 1977, 1984; Tversky and Kahneman, 1980; Payne, 1982; Macía, Barbero, Pérez-Llantada and Vila, 1990; White, 1990, etc.) suggests a conception of decisions as the result of a scale of inferred preferences that lead, in an objective way, to a particular choice; it also suggests focusing the problem on the measurement of the preferences on which subjects base themselves in order to resolve the state of ambiguity confronting them in a given situation.

The procedure followed in order to achieve the proposed objective is based on Savage's *Principle of Insufficient Reason* (1954), in which the possible results are evaluated through subjective utilities multiplied by the probabilities, also subjective, assigned by subjects to the different events that lead to a random choice, where the preference scale does not play a rational role in the decision.

In accordance with this model, the results obtained permit the measurement of the degree of job satisfaction involved in a particular job and the subject's appreciation of the utility of the psychosocial motivations associated with the job, as well as the prediction of the level of job satisfaction a subject will experience within the specific field of work.

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BEHAVIOURAL DECISION THEORY

Philosophical rationalism established a bridge between the senses and reason in order to explain man's knowledge. Kant (1781) maintained that the exterior world sends man a set of disordered, formless and chaotic stimuli which, on being perceived, are organised in categories, thus constituting phenomenological knowledge. He claimed, in sum, that knowledge consists of what is presented to the subject and what the subject does with it, which he called *intuitions*.

The inclusion of intuitions, as the basis of human knowledge, made possible the development, in the field of mathematics, of the theory of expected utility (Neumann and Morgenstern, 1944; Savage, 1954; Bernouilli, 1954) for explaining human decisions. Classic probability theory assumed that decisions were governed by what is known as mathematical expectation, understood as the expected value obtained by multiplying the possible results of an event by its objective probability of occurrence. Bernouilli observed the lack of empirical confirmation of this perspective, and reformulated it, substituting the objective values scale by a subjective one which he called a "utility scale". Neumann and Morgenstern, combining the utility and probability theories, developed an entire series of axioms to explain rational behaviour through the construction, by the subject, of a utility function that would take account of his/her preferences in the case of different results. By substituting objective values with the corresponding subjective ones, the subject establishes a scale of preferences that allows him/her to create a utility function, defined by axioms on preference-indifference relationships, and whose ultimate purpose is to maximise expected utility on the expectations that this process generates in the subject.

Savage (1954) completes Neumann and Morgenstern's model by substituting the objective probabilities with subjective ones fixed by subjects according to their own criteria, thus obtaining the *expected subjective utility* model.

All of these perspectives are consolidated within psychology as the so-called Behavioural Decision Theory (BDT) aimed at the study of how decisions are made and how they should be made (Coombs, Dawes and Tversky, 1981).

PSYCHOLOGICAL ELEMENTS OF BDT

Josef Kozielecki (1981), in his book *Psychological decision theory*, offers a perspective halfway between psycholinguistics and Piaget, and which bases the study of decisions on human operational systems. Kozielecki considers the decision-maker as an information-processing system which, rather than describing the task, makes an internal representation of it and the risks it implies. "Decisions would be influenced by subjects" personal clearacteristig, their personality and their cognitive system. Through the analysis, based on Bayes' conditional probability theory, of certain exercises carried out in situations of uncertainty, they reach the conclusion that subjects draw up a series of internal schemas based on cause and effect relationships, which leads them to the decision after they have, subjectively, assigned causality to it.

Carroll and Payne (1976) carried out an interesting study in which they analysed decision-making as an activity that relates personal perception to personal attribution and information processing. Their conclusion is that decisions should be studied from the perspective of psychology and its theoretical principles. Gul (1985) demonstrates the relationship between cognitive styles and decision-making, considering the former as mental categories that operate at different mental levels.

Mitchell and Beach (1976) and Zedeck (1977) maintain that Behavioural Decision Theory can be used as a measure of social motivations; Harrel and Stahl (1981) reaffirm this on demonstrating it experimentally, through the use of the T.A.T. in a job-choice situation.

Atkinson and Feather (1966) analyse the search for employment and, in consequence, choice of occupation, through Expectation-Value Theory, which maintains that young people initiate jobseeking when they perceive the possibility of finding a job and work is valued positively.

Thus, if job satisfaction is conceived as the degree of fit subjects experience between their needs, their expectations and the benefits of the job (Mumford, 1976; Locke. 1976; Holland, 1985; Michalos, 1986), we can relate work motivation to the satisfaction offered by a particular job. If, in addition, we consider work motivation as the utility subjects find or expect from working, we can, including the level of job satisfaction, define a subjective utility function that explains the reasons why subjects work.

In the case of two or more utility functions being defined for the same group in different employment situations, it would be possible to analyse their evolution over time, allowing the function to predict the workers' performance. If the measures for obtaining the utility function and its evolution were taken for workers and unemployed people, the predictive function could also serve as an instrument for choice of profession.

METHOD

Sample

The subjects in this study are participants in the *Escuela Taller y Casa de Oficios* (Workshop School and Vocational Centre) programme sponsored by the National Institute of Employment (INEM). The *Escuela Taller y Casa de Oficios* (E.T./C.O.) programme was set up in 1985 on an experimental basis, under the control and management of the National Institute of Employment. Its aim is to improve the employment possibilities of jobless people under 25 (until 1994 over 25s were also allowed to participate) through training and work experience courses in the areas of: restoration and promotion of the artistic, historical, cultural or natural heritage; rehabilitation of urban or natural environments; improvement of citizens' living conditions; as well as in other activities related to the social and general welfare of the public. Through the programme young people would acquire the professional skills and experience necessary to find employment in these areas.

The E.T./C.O. programmes may be sponsored by civil service departments, local councils, regional governments or institutions, national associations, non-profit making organisations, etc. Both the Workshop Schools and the Vocational Centres offer a six-month initial training phase, and another phase (more than one extra phase in the case of Workshop Schools) of training combined with work experience. The aim of these second phases is to provide learning and the opportunity to acquire qualifications and professional experience. The duration of the entire programme is one year in the case of the Vocational Centres and between one and a maximum of two years in the Workshop Schools.

An important aspect of these programmes that should be borne in mind is that only those who have failed to achieved the objectives of secondary school education are admitted as participants. Programmes are organised with the specific aim of providing participants with basic and professional training that will allow them to work or continue their studies in areas regulated by the *Ley Orgánica del Sistema Educativo* (LOGSE), the Spanish law governing education.

During the first stage of training, E.T./C.O. participants are entitled to receive the grant provided for in R.D. (Royal Decree) 631/93, of around 600 pesetas (slightly less than 4 Euros) per day. In the second stage they are taken on under an Apprenticeship Contract as long as they fulfil the statutory requirements.

In 1993, a total of 37,120 students throughout Spain began the initial training stage of the E.T/C.O programme. 1,030 (2.8%) of these were from the province of Cádiz. The sample used in this study was made up of 500 subjects with no previous work experience that had been accepted as participants on one of the E.T./C.O. in the province of Cádiz. The characteristics of the sample can be seen in Table 1.

Officially, participants had no prior professional experience, though some had worked in domestic tasks or illegally in family businesses.

Research design and variables used

The general design used for this study falls within the framework of non-experimental longitudinal designs. The procedure followed consisted in the application of two questionnaires, one biographical and the other of psychosocial motivation (*Motivación Psicosocial*, MPS), in two different phases, to a sample of subjects that had been admitted as students to E.T./C.O. Projects in different parts of Cádiz province.

Table 1 Sample characteristics in initial phase (students)	
AGE: Mean: 20.16 yrs. Range: 16-25 yrs. Standard deviation: 2.549.	
SEX: Males: 347 (69.4%). Females: 150 (30%). No answer: 3 (0.6%)	
EDUCATIONAL LEVE	
Basic education	139 (27.8%)
Basic Secondary Education	249 (49.8%)
Ordinary Grade Technical Training	72 (14.4%)
Advanced Grade Technical Training/High School Certificate	9 (1.8%)
University Entrance Certificate	28(5.6%)
Don't know/No answer	3 (0.6%)

The application of the questionnaires (abridged MPS and biographical) in the first phase was carried out in the students' first month as participants in the Project (student phase). So that students answered more honestly, the application was carried out anonymously, and a code (known only to the student and the researcher) used for purposes of subsequent matching. The only identification data students were obliged to provide were biographical details (age, sex, level of education and the course being studied).

In the second phase, with subjects now having spent a total of nine months on the Project, the biographical questionnaire (with an extra item on level of satisfaction produced by participation in the Project) and the psychosocial motivation questionnaire (complete MPS) were applied once more.

Fernández Seara's Psychosocial Motivation Scale (MPS), published by TEA in 1987, is made up of 173 items. These are divided into three sections: the first section (Item 1 to Item 126) requires a T/F (true/false) response, depending on the extent to which the subject is in agreement with the statement; the second (Items 127 to 147) and third sections (Items 148 to 173) have a similar answer mechanism, whereby the subject has to select from a series of items only those which s/he finds attractive, indicating the degree of that attraction. The second part is evaluated on a scale with three response categories: average (2), a lot (3), and very much indeed (4), while the third uses a scale with four response levels: some (1), average (2), a lot (3) and very much indeed (4). Another difference between the second and third sections is that the items of the second section focus on work-related aspects and those of the third on matters related to subjects' life in general.

Using the principal components analysis technique, six basic psychosocial motivations are defined: Social acceptance and integration (SA), Social recognition (SR), Self-esteem/Self-concept (SC), Self-development (SD), Power (PO) and Security (SE).

The theoretical model used in the construction of the questionnaire recognises that motivations are dynamic and are expressed in different behavioural forms, objective and subjective. Therefore, five components are defined in which the different motivations are to be measured. These components are conceptualised as levels, and cover aspects such as: the arousal action of the behaviour (*Level of Arousal* -ARO-), subject's cognitive anticipation with respect to the probability of success or failure in a given task (*Level of Expectations* -EXP-), the degree of effort the individual makes in order to achieve goals (*Level of Execution* -EXE-), the importance the subject places on external reinforcers (*Value of Incentives* -INC-) and the degree to which external incentives or reinforcers exceed what the subject considers to be fair or insufficient (*Level of Satisfaction* - SAT).

The MPS scale is adapted to the world of work, and the content of the items is related to aspects specific to that context. Since the subjects in the first study phase were students with no professional experience, some of the scale's content had to be omitted so that the questionnaire would be more appropriate to the particular situation. Items corresponding to the following components were eliminated: Value of Incentives and Level of Satisfaction. In addition, all items referring to particular work situations were removed from the Arousal, Expectations and Execution components. The final abridged version of the MPS was made up of 89 items covering the six factors (basic psychosocial motivations) measured only in the Arousal, Expectations and Execution components.

The material was organised so that in the first phase of the study only the abridged MPS questionnaire, adapted to the situation of the students, was to be applied, and in the second phase the complete MPS questionnaire in its original form would be applied. A measure of General Satisfaction Level (GSL) would also be taken in the second phase.

Variables used were:

GSL: level of life satisfaction generated by participation in the Project.

PSYCHOSOCIAL MOTIVATIONS: ALL THEIR COMPONENTS (30 VARIABLES)

- **Social Acceptance (SA): Need for emotional relationships with others**
  - Arousal Component (ARO)
  - Expectations Component (EXP)
  - Execution Component (EXE)
  - Incentives Component (INC)
  - Satisfaction Component (SAT)

- **Social Recognition: Need for social approval and esteem from others.**
    - Arousal Component (ARO)
    - Expectations Component (EXP)
    - Execution Component (EXE)
    - Incentives Component (INC)
    - Satisfaction Component (SAT)
- **Self-esteem/Self concept: Need for personal esteem and self-confidence**
    - Arousal Component (ARO)
    - Expectations Component (EXP)
    - Execution Component (EXE)
    - Incentives Component (INC)
    - Satisfaction Component (SAT)
- **Self-development: The need and human tendency to develop personal capacities, undertake projects and set oneself new goals**.
    - Arousal Component (ARO)
    - Expectations Component (EXP)
    - Execution Component (EXE)
    - Incentives Component (INC)
    - Satisfaction Component (SAT)
- **Power: The need to achieve prestige and professional success and at the same time search for the means and conditions to influence and direct others**.
    - Arousal Component (ARO)
    - Expectations Component (EXP)
    - Execution Component (EXE)
    - Incentives Component (INC)
    - Satisfaction Component (SAT)
- **Security: The need for mental stability.**
    - Arousal Component (ARO)
    - Expectations Component (EXP)
    - Execution Component (EXE)
    - Incentives Component (INC)
    - Satisfaction Component (SAT)

ANALYSIS AND RESULTS

First of all, using the data obtained in the second phase (complete MPS), a discriminant analysis was carried out. The criterion used for the selection of variables was Mahalanobis' maximisation of squared distances (Bizquerra, 1989), with General Satisfaction Level (GSL) being used as the grouping variable. Since the subjects within the GSL variable were distributed along a preference scale of 1 to 10, an excessive number of groups was generated for the discriminant analysis to be carried out. Given the possibility that there might not be a clear difference between two adjacent variables, it was considered appropriate to divide the sample into three groups and choose the two extremes, leaving out of the initial analysis the group including subjects with intermediate values. The number of subjects selected for the analysis altogether represented 37.2% of the total. There were 97 subjects within the DISSATISFIED category (scores of less than 6) and 89 subjects that fell into the SATISFIED category (scores of equal to 10), so that the two groups were of comparable size.

The results of this discriminant analysis show that only 8 of the 30 variables used (six psychosocial motivations multiplied by the five components in which each had been measured) discriminate significantly among the subjects. As the Stepwise method excludes from the analysis values that do not provide significant information in the discriminant function, the eight values included reflect the motivations that actually establish differences between the categories of satisfied and dissatisfied. In order to understand the acronyms used, note that the first three letters refer to the measurement compo-

Table 2
Psychosocial motivations that significantly discriminate membership among groups

STEP	VAR.	LAMBDA	SIGNF	MIN. D²	SIGNF.
1	EXESE	0.7674	0.0000	1.2014	0.0000
2	EXPSD	0.7026	0.0000	1.6775	0.0000
3	AROSA	0.6629	0.0000	2.0153	0.0000
4	INCSA	0.6402	0.0000	2.2275	0.0000
5	AROPO	0.6294	0.0000	2.3338	0.0000
6	EXESR	0.6236	0.0000	2.3924	0.0000
7	AROSE	0.6187	0.0000	2.4424	0.0000
8	AROSR	0.6125	0.0000	2.4967	0.0000

Table 3
Coefficients of the discriminant function

EXPSD	0.095574441
AROSE	-0.05838563
AROSR	0.05425280
AROSA	0.10810130
AROPO	-0.06248317
EXESR	0.04213495
EXESE	0.09114445
INCSA	0.09232139
K	-4.434108

nent and the last two to the motivation. Thus, for example, AROSE would indicate the Arousal (ARO) component in the Security (SE) motivation.

In this table we can observe the Wilks' Lambda value (quotient between determinant of the variability matrix within the groups and determinant of the total variability) and the least squared differences obtained by the Mahalanobis method (measure of distance between the two groups), as well as their respective significance levels.

Table 3 shows the discriminant function, which is a linear combination of the eight variables included and a constant, similar to the multiple linear regression equation.

This discriminant function is needed in order to assign the subjects to their appropriate groups. In our case, the discriminant function correctly classifies 80.65%.

Once the discriminant function has been obtained, the Utility Function is constructed following Savage's formulation (1954). Since we have all the necessary elements at our disposal, it is possible to construct a *Work Utility Function* for each subject of the form: $Ut=\Sigma pm_i*Um_i$, where work utility (Ut) is equal to the sum of the products of the subjective value Um_i (direct score obtained by the subject in each of the variables included in the discriminant function) according to their weight within the discriminant function pm_i (coefficients of each of the previous variables in the discriminant function). This Utility Function explains that a job is useful insofar as it permits the subject to satisfy his/her psychosocial needs.

However, as it was of interest to check the possibility of estimating, by means of the Work Utility Function, the degree of General Satisfaction a participant on this type of E.T./C.O. Project would experience, a calculation was made of the mean of the scores assigned (through the Work Utility Function) to subjects within the same level of the General Satisfaction variable (Table 4). For instance, the mean subjective utility of subjects in Category 10 of the General Satisfaction variable would be 0.82. Category 4 includes all subjects with a score of less than or equal to 4, since the number included is very small.

It can be observed how the mean scores estimated through the utility function change their sign from the 7 value onwards. The negative scores appear, according to the results of the discriminant analysis, in those cases in which subjects feel most motivated by the achievement of Security and Power, whilst when they are more attracted by Social Acceptance, Social Recognition and Self-development they present positive results (Table 5).

Graph 1 shows, on the *y*-axis, the mean work utility function scores for each value of the GSL (*x*-axis) variable. It can be observed that subjects who consider the Project to be useful with respect to their professional and personal interests (positive utility) feel satisfied, while those who do not consider it useful (negative utility) feel dissatisfied. This utility function, it will be remembered,

Table 4
Utility function values

GSL	M. FUNCTION
4	-0.88
5	-0.92
6	-0.51
7	-0.04
8	0.24
9	0.34
10	0.82

Table 5
Motivational factors and measurement levels in the discriminant function

SA	AROUSAL
	VALUE OF INCENTIVES
PO	AROUSAL (negative)
SE	AROUSAL (negative)
	EXECUTION
SR	AROUSAL
	EXECUTION
SD	EXPECTATIONS

Graph 1
Job satisfaction utility function

UTILITY FUNCTION
DATA FROM WORKER PHASE

SATISFACTION LEVEL
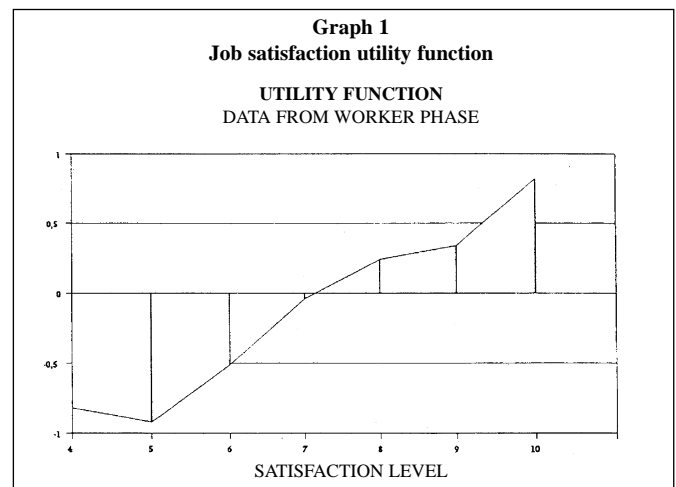
was constructed with data obtained in the second phase, in which subjects had already undergone basic training and had progressed to the status of students-workers.

The ultimate objective of the study was to attempt to construct a utility function that would allow us to predict subjects' job satisfaction in the different Projects on the basis of the data obtained in the first phase, when they were still students. However, in this phase there was no available measure of subjects' job satisfaction level (the GSL variable), since they had no work experience.

The following steps were taken to resolve this problem:

a) The variables included in the discriminant function obtained (see Table 2) are examined, and those that have been measured in the first phase using the abridged MPS are identified. As it will be remembered, in this abridged MPS version all measures corresponding to the Value of Incentives and Satisfaction components were omitted due to the fact of all their items being related to the world of work, of which subjects in the first phase as yet had no experience. It should also be borne in mind that one of the variables in the discriminant function is the Social Acceptance factor measured in the Value of Incentives component, which was not measured in the first phase (abridged MPS). Therefore, in the first phase only seven of the eight variables included in the discriminant function would be measured.

b) From the data obtained through the application of the complete MPS, those corresponding to these seven variables are selected, and with this information a new discriminant analysis is carried out. Table 6 shows the discriminant function obtained. As it can be seen, of the seven variables included in the analysis, only five form part of the function: Security (Execution), Self-development (Expectations), Social Acceptance (Arousal), Social Recognition (Arousal) and Social Recognition (Execution). Power (Arousal) and Security (Arousal) are excluded.

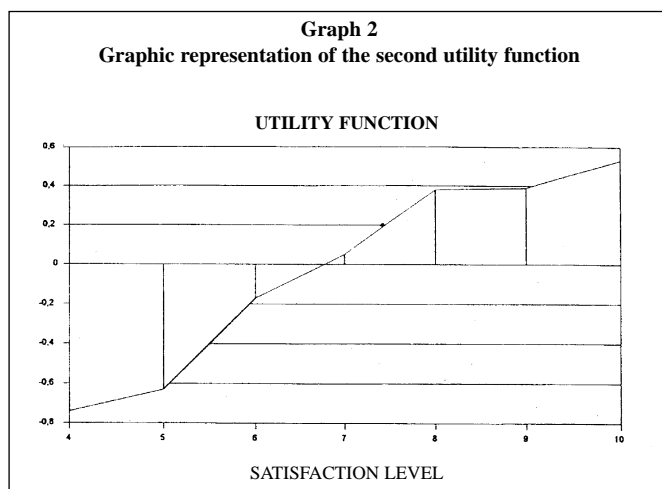This second function allows 72.58% of correct classifications to be obtained.

Despite the fact that this discriminant function has a predictive power of approximately 8% less than the first one, on correlating the values of the two functions a Pearson correlation coefficient of 0.75 is obtained, indicating an acceptable level of similarity between them.

c) In the same way as for the first discriminant function, a second *Work Utility Function* is constructed, and subsequently, using this second utility function, a calculation is made of the scores assigned to subjects included in the same level in the General Satisfaction variable (Table 7). Once again we note the presence of negative and positive values. In this case the change in signs of the values occurs at Point 6.

The graphic representation of the values (Graph 2) shows the inflection produced at Value 7 of the satisfaction scale, which leads us to accept this value as a cut-off point dividing dissatisfaction from satisfaction.

Table 6
Discriminant function of the second analysis

VARIABLE	FUNCTION
EXESE	0.1440641
EXPSD	0.2555218
AROSA	0.1450000
EXESR	0.1189110
AROSR	-0.0684841
K	-5.5585672

Table 7
Second Utility Function

GSL	MEANS
4	-0.74
5	-0.63
6	-0.17
7	-0.05
8	0.38
9	0.39
10	0.53

Graph 2
Graphic representation of the second utility function

UTILITY FUNCTION

SATISFACTION LEVEL

d) Nevertheless, since the values are obtained at a point in time at which the subjects are workers, the functions obtained would only be valid for subjects with work experience. Therefore, in order to be able to use this function when subjects begin the programme or while they are still only students (which is what we are really interested in), it is necessary to confirm its effectiveness with the original data of the abridged questionnaire (first phase).

To this end, a third *Work Utility Function* with the motivational values obtained in the first phase of the study (student phase) is constructed. This function will enable the prediction of Job Satisfaction obtained by subjects without work experience or students when they finish the Project. This is important, because what really interests us is the selection of subjects who will achieve the highest job satisfaction in these programmes.

e) Since the subjects in this phase still do not have any work experience, there are obviously no data relating to the degree of Job Satisfaction, so that it is impossible to calculate the work utility function by following the same procedures as in the previous cases.

In this phase, only the direct scores in the motivational factors of the abridged MPS are available; the values of the General Satisfaction variable are not. It is therefore impossible to estimate the coefficients by which we should multiply each of these values, since these coefficients are derived from the General Satisfaction variable.

Graph 3
Graphic representation of the second and third utility functions

SATISFACTION AND UTILITY

It was considered, as an alternative for calculating the utility function in the student phase, to use the data obtained in the second utility function with the data of the workers.

f) It will be remembered that to find the score assigned to each subject in the second utility function, the direct scores corresponding to the variables EXESE, EXPSD, AROSA, EXESR and AROSR (of the abridged MPS) obtained on applying the complete MPS to subjects in the second (or worker) phase of the programme were multiplied by the coefficients obtained from the discriminant analysis. If, in this calculation, we maintain the previous coefficients, but instead of using the scores obtained by students in the second phase (complete MPS), we use those obtained in the first phase (student) for the same variables, a third *Work Utility Function* can be obtained.

g) Since the scores assigned through the third utility function are derived from the data of the second utility function, the existence of a relationship between the two assigned scores remains to be confirmed. In addition, since all the calculations made to find the second utility function were based on the discriminant analysis between the motivational values and the General Satisfaction variable (classification variable), the relationship between the third utility function and General Satisfaction is also unknown.

In order to check the degree of similarity between the two work utility functions (second and third), and between these and the General Satisfaction variable, a procedure made up of different phases was followed. First, a distribution in centiles was obtained of all scores assigned, through the second utility function, to subjects in the second (worker) phase. Second, the centile value was found which, within the previous distribution, was
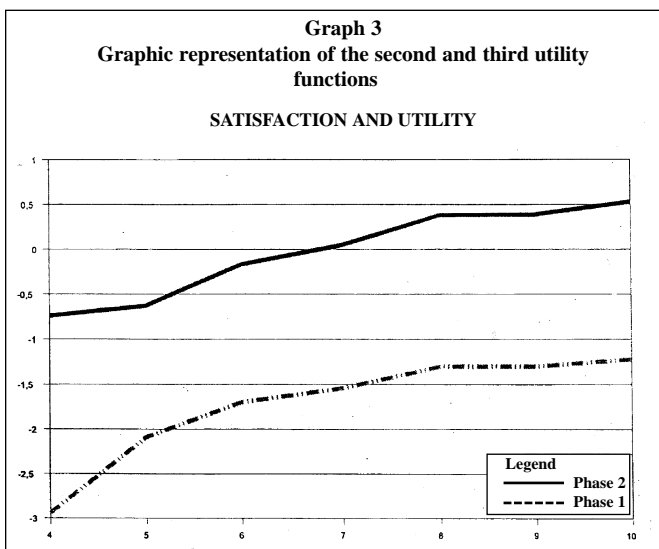
Table 8
Centile values s of the two discriminant functions

Satisfaction Level	2nd Function	Centiles	3rd Function
4	-0,74	6	-2,94
5	-0,63	20	-2,09
6	-0,17	32	-1,70
7	0,05	39	-1,54
8	0,38	51	-1,30
9	0,39	51	-1,30
10	0,53	56	-1,22

obtained by each of the mean scores assigned through the second utility function to subjects included in the same level in the General Satisfaction variable. Third, the distribution in centiles of all the scores assigned through the third utility function to subjects in the student phase was found. Finally, we searched for all of those values assigned through the third utility function that corresponded to the centiles of the mean scores assigned through the second function to subjects included in the same level of the General Satisfaction variable. The results of this entire process can be seen in Table 8.

If we consider the positive values in the functions calculated for the worker phase (first and second utility functions) as an indication that subjects were satisfied, in the case of the third function, where all the values are negative, this indicator is reflected by the value –1.54.

When the mean scores assigned for the second and third utility functions are represented in terms of the levels of the General Satisfaction variable, we can observe a close correspondence between the two (Graph 3). Also, since there is a change of sign in the second function between percentiles 32 and 29, and given the similarity between the distributions, the value –1.54 in the third function can be considered as similar to the value 7 in the second function. It can therefore be accepted that the more the values obtained with the third function exceed –1.54, the greater will be the predicted degree of job satisfaction; and the reverse –the lower these values, the lower the predicted degree of job satisfaction.

CONCLUSIONS

Although it is clear that one of the main motivations that explain why subjects work is salary (Bravo and cols., 1993), the results obtained from the different analyses allow us to conclude that level of Job Satisfaction is also strongly influenced by aspects of work related, at a given moment, to needs of a social nature (social recognition, social acceptance and security) and to an increase in future employment possibilities (self-development). These conclusions are supported by various studies (Hackman and Oldman, 1976; Peiró, 1984; Wosy, 1989; Peiró and cols., 1987, 1990, 1993, 1994; Sanchís, 1991; MOW, 1991; Salanova and cols., 1993.)

For those who are unable to maximise the utility of the speciality (negative utility in terms of Decision Theory), their remaining on the programme can only be attributed to the economic incentive, so that the Project becomes merely a temporary means of subsistence.

With respect to the third utility function, we venture to suggest that all scores higher than –1.54 obtained in subjects without work experience would be indicative of their future degree of dissatisfaction in this employment context.

Finally, we believe that the three utility functions obtained may serve to predict and explain job satisfaction levels, by means of the appreciation of the utility subjects attach to the actual work done, in a context with such specific characteristics as those of Occupational Training programmes.

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