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E-Cognocracy and the Participation of Immigrants in E-Governance

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Founded in 1963 by two prominent Austrians living in exile – the sociologist Paul F. Lazarsfeld and the economist Oskar Morgenstern – with the financial support from the Ford Foundation, the Austrian Federal Ministry of Education and the City of Vienna, the Institute for Advanced Studies (IHS) is the first institution for postgraduate education and research in economics and the social sciences in Austria. The **Economics Series** presents research done at the Department of Economics and Finance and aims to share “work in progress” in a timely way before formal publication. As usual, authors bear full responsibility for the content of their contributions.

Das Institut für Höhere Studien (IHS) wurde im Jahr 1963 von zwei prominenten Exilösterreichern – dem Soziologen Paul F. Lazarsfeld und dem Ökonomen Oskar Morgenstern – mit Hilfe der Ford-Stiftung, des Österreichischen Bundesministeriums für Unterricht und der Stadt Wien gegründet und ist somit die erste nachuniversitäre Lehr- und Forschungsstätte für die Sozial- und Wirtschaftswissenschaften in Österreich. Die **Reihe Ökonomie** bietet Einblick in die Forschungsarbeit der Abteilung für Ökonomie und Finanzwirtschaft und verfolgt das Ziel, abteilungsinterne Diskussionsbeiträge einer breiteren fachinternen Öffentlichkeit zugänglich zu machen. Die inhaltliche Verantwortung für die veröffentlichten Beiträge liegt bei den Autoren und Autorinnen.

Abstract

This paper develops a new approach for a political support system related to the integration of immigrants using *e-governance*. Through the Internet the participation of immigrants is possible in both societies, the original and the new one, and at the three different levels: local, regional and national. Using the Analytic Hierarchy Process (AHP), we discuss how to consider immigrants as *e-citizens* and, through a questionnaire, and we measure the relative importance of these attributes for party decision makers. The focus of this paper is less on technological aspects of *e-decision* making, or the diffusion of knowledge and *e-learning*; Rather on the new aspects as how to integrate immigrants in *e-governanc*e. The mission is to increase the society-oriented knowledge derived from participatory decision-making and to increase the background and the scope of the learning process that goes along with the modification of the initial preferences in the interactive political resolution process.

Keywords

E-cognocracy, e-democracy, e-citizen, e-participation, immigration, knowledge society

JEL Classification

H100

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1. Introduction

Two political topics have attracted attention during the recent years and have raised interests from our western democratic point of view: (i) the validity and suitability of the actual democratic system and (ii) the recent phenomenon of immigration. In the first case, there exists a line of thought that considers that traditional democracy is loosing attraction for most people due, among other causes, to the lack of real participation of the citizens in their own governance. In the second case, political and social problems in connection with immigration are a very sensitive issue in modern Europe. For example, the governance of the European Union through directives shows that one should develop global concepts for the solution of global problems. In this sense, it is advisable to search for procedures for the integration of immigrants in the European political system. As a side task, we analyze how the political parties in European countries are positioned with respect to the question of giving the new immigrants participation or voting rights or finally the citizenship.

To deal with these challenges, the paper proposes a new procedure that is based on the notion of *e-cognocracy*, a new *e-democratic* implementation system, which was proposed by Moreno-Jiménez and Polasek (2003). Such an approach will increase the *e-participation* of citizens in European societies and will establish a new framework to accumulate and enrich the formation of knowledge in the countries where the immigrants are involved: the original and the destination country.

The framework we consider for the migration problem can be extended to the three levels of political participation: *local, regional and national*. In each of these levels we discuss the criteria to give an immigrant the status and – in future – the rights of a citizen, possibly as an *"e-citizen."* As a goal of this *e-cognocracy* approach we increase the political awareness and the transparency of the decision process by eliciting the relative importance of the attributes (criteria) between the political parties and decision makers. To be operational we need input data values that are obtained by an empirical analysis in two countries of the EU (Austria and Spain). The first part of this analysis is a pilot study with data obtained from student representatives in Vienna (Austria) during September 2004. The questionnaires deal with the criteria parties in Austria associated with the right of an immigrant to become a citizen of Austria or to obtain local voting rights.

Despite the cognitive constructivist and abstract character of *e-cognocracy*, the approach requires the consideration of philosophical, methodological and technological aspects of the underlying decision problem. In the following we exclusively deal with the philosophical aspects associated with the inclusion of immigrants in the political participation of a country and with some methodological aspects related to the extraction of knowledge for a rather small group of decision makers. In particular, we fix the methodological framework for a discrete number of decision makers and we propose a method to measure the amount of learning that follows quite directly from the solution process.

The learning process is evaluated through the analysis of the modifications the initial preferences (judgments) suffer through a new solution process. Thus, the analysis of the changes in judgment during the elicitation procedure of preferences is an iterative procedure very similar to the Delphi Method,[1] which was developed for expert elicitations of long-range forecasts. Our method differs since no long-term target is involved and in the kind of information that is sent to the participants in the successive iterations of the whole procedure. Note that this iteration method involves more complicated pieces of knowledge than e.g. the evolution of preference structures or the exploration of a critical point for finding compromises in the decision process.

The paper is structured as follows. After this brief introduction, section 2 includes the foundations and objectives of *e-cognocracy*. Section 3 presents how to separate the two groups of "voters" considered in *e-cognocracy*, those that transfer their representation to the traditional political parties and those that directly participate in their governance using the Internet, to allow the knowledge contribution of immigrants in both societies: those of origin and of destination. Section 4 explains the empirical study developed to determine the attributes considered to declare an *e-citizen* and the relative importance of them. Finally, section 5 highlights some important conclusions of the present and future work.

2. E-Cognocracy

We think that the intention of our "New" or "Knowledge" Society is to search for improvement of the communication, interdependences and interfaces between the individuals using the Internet. In our view it is also intertwined with the tendency for increased learning on an individual and a global scale, a further step in the development of human intelligence, which accumulates and processes information for the good of our society (a goal that has been promoted since the period of enlightenment, see e.g. Diderot).

The modern Knowledge Society provides one of the approaches that can be used to incorporate the new insights of philosophical, methodological and technological advances into the new democratic system. This transformation of our society into a new state by the means of the Internet and the knowledge networks – a continuation of the changes we witnessed during the last two decades –, is called *e-cognocracy* in the paper of Moreno-Jiménez and Polasek (2003).

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[1] The Delphi Method was developed by the RAND Corporation in 1969 for technological forecasting and is a group decision process about the likelihood that certain events will occur.

The present transformation processes can lead to a new democratic system with the goal to improve the citizens' quality of live despite an increasing complexity of a post-industrial and service-oriented society. We try to model the evolutional aspects of human systems, and for the evaluation of decision processes we use (Saaty, 1980) the concepts of the Analytic Hierarchy Process (AHP) in addition to the network as technological support that is described in Moreno-Jiménez (2002, 2003a). *E-cognocracy* can be characterized by the following objectives:

a) the extraction of the knowledge related to the process of solving public problems in a democratic way (*e-knowledge* preparation);

b) the constant involvement of citizens in their own governance (*e-participation*) and

c) to overcome several shortcomings and limitations of the traditional democratic system (*e-democracy*).

With respect to the last point we can mention some frequently cited limitations of the present system:

(i) In most countries the participation of the citizens is limited to the election day;

(ii) the electoral lists are controlled by the members of the political parties;

(iii) the critical opinions within parties are restricted or rejected;

(iv the parties may have hidden interests and

(v) the public control of the parties is very limited.

2.1 Knowledge accumulation through the Internet

E-cognocracy can be viewed as a recent conceptual contribution using communication technologies in the political system of Western democracies. The types of democratic processes involved range from *e-management* (performing routine tasks of public management through electronic media) to *e-voting* (all types of online elections or decision making), from *e-governance* (preparing and propagating government tasks over the internet) to *e-democracy* (including all kinds of deliberation processes, like feed-backs and debates using the web), and, finally, to *e-cognocracy* (i.e. the value-added to the society by the creation and diffusion of global knowledge).

The main characteristics of the *e-cognocracy* approach are:

(i) to involve the citizens in a system of direct participation;

(ii) to favor understanding and communication;

(iii) to encourage learning and the development of intelligence;

(iv) to promote consensus and tolerance;

(v) to improve transparency, democratic controls and multi-cultural coexistence, and

(vi) to facilitate education and the formation of knowledge.

2.2 Can it be realized?

As for all new concepts there are the important issues of feasibility, practicability and implementability. With respect to these operative points of *e-cognocracy,* these can be synthesized as follows:

(i) citizens can choose the way they participate in political decisions: personal or delegated;

(ii) the parliamentary representation could be divided into two groups: one part for parties (e.g. around 2/3 of the seats [2]) and the other part for citizens (the remaining seats);

(iii) the list of topics that can be solved by means of *e-cognocracy* must be fixed (to prevent populism);

(iv) the ultimate mission is the extraction and diffusion of society-relevant knowledge for future problem solving;

(v) the relevant knowledge is structured into patterns of social behavior and knowledge and

(vi) the proposed procedure works in a similar way for decision making by individuals or in groups.

Finally we want to note that today there is a digital gap between the digitally developed (or "www") world and the non-digital remaining ("non-www") world that needs to be decreased and possibly eliminated over time. It would be irresponsible if new technologies were used to maintain the present global or digital gaps. Also it would be inexcusable if web based technologies were used to exercise greater control over individuals and led to a reduction of personal freedom. Moreover, we think that *e-cognocracy* is aimed at reducing the fragmentation and individualization of a society and, in addition, is designed to increase the social and political cohesion at any public level. To overcome one of these shortcomings of traditional governance, we propose a procedure in the next section showing how the immigration problem can be incorporated in the governance of a society by the concept of *e-cognocracy*.

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[2] Such a distribution of seats will reflect the willingness of a country to introduce direct voting seats. German has currently a voting system, which gives each voter 2 votes: one for party seats and one for giving a direct person vote.

3. Immigration and Participation

Until now we have discussed the fundamental aspects and the main characteristics and operative aspects of *e-cognocracy*. In this section, according to the considerations raised in Moreno-Jiménez (2003b, 2004), we propose a new framework that allows the integration of both, immigrants and emigrants into a modern system of governance.[3] In many countries we are confronted with the separation of the population into (at least) two groups. The first group consists of citizens that have the right to vote and in the second group there are all the people without this right. For the first group, we further distinguish two sub-groups: one sub-group delegates their votes to the traditional political parties, whereas the second sub-group consists of people who are actively involved in direct public and political participation, possibly *e-participation*. The group without the right to vote is split into two sub-groups: one sub-group consists of the immigrants living in the country that do not satisfy the conditions to be considered as citizens with voting rights, and the second sub-group are emigrants who have left the country but had been given full citizens right before.

The final group includes the rest of citizens that could be of a greater order of magnitude (e.g. the citizens of a region for decisions in a local context; the citizens of a nation for decisions in a regional context, and for decisions in a national context we could consider citizens of other EU countries). Figure 1 demonstrates the problems and their relationships within the *e-government* system.

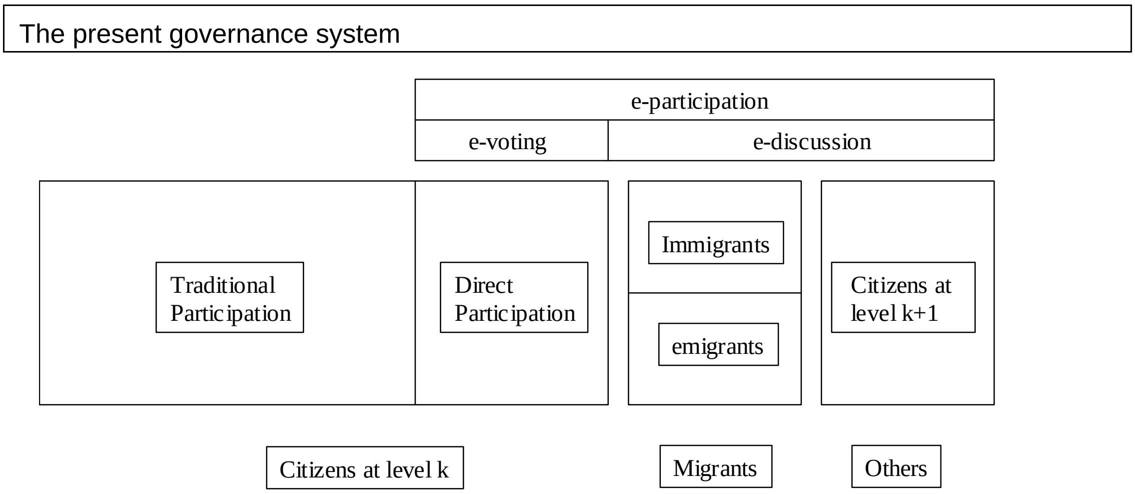

Figure 1: Structural framework for migration problems by *e-cognocracy*

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[3] In a further paper, we will consider three public levels of implementations of such a procedure, i.e. the local (LO), regional (RE) and national (NA) level of e-democracy (in short we will refer to this as the LO_RE_NA scale).

Beginning with a specific context (on a national level for example), the conditions that an individual must fulfill to obtain the right to vote are specified by an exhaustive list based on national laws. The group of migrants could participate in discussions through the Internet provided that the language barrier can be removed, and gradually they obtain the right of *e-participation* and *e-voting*, possibly according to the duration of the time they have been working in a community (or region or nation). Other conditions might also be specified but they should be all in accordance with the (future) European constitution or the human rights (see also Barber (1984) or Dryzek (2000)).

Thus, this procedure shows that migrants will gradually obtain different states of their rights for *e-participation*. In exercising their right either in the origin or destination country the will become *e-citizens* in the framework of *e-cognocracy.*

The status of an *e-citizen* sounds at the first moment very artificial, but our future society will be based on more and more mobility. Therefore it will become quite common if people spend more time for work and education outside their home communities. Note that in the EU the mobility of labor is one of the four fundamental principles of freedom.[4] Besides, there are many more educational mobility programs supported and initiated by the EU, which will further encourage the exchange of students, teachers and researchers.

In future, many people will consider the EU as their political framework where they would like to participate and exercise their public and political rights. In such a framework we need new ideas of *e-governance* and new proposals for implementations that will serve the interest of all the participating parties. *E-cognocracy* is such a system and we demonstrate in the next section how it can be used to solve integration problems.

4. A First Pilot Study

In this section we want to present a case study on *e-cognocracy* involving the aspects of integration of foreign migrants into the local political community. We demonstrate how to obtain the relative importance of the attributes for the integration of immigrants in the democratic system. For this we determine the objectives and design a multi-step procedure. Ideally we would like to have case studies in one or more European countries, but at the moment we report the results of a pilot study.

The empirical approach is planned to encompass the following steps that will be supported by the use of Internet:

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[4] Free mobility of people, mobility of labor, mobility of capital and the free mobility of goods.

a) Presentation of the problem and the necessity of a political decision to the participants.

b) Elicitation of the initial preferences of all the participants.

c) Analysis of the information and extraction of patterns of knowledge that are needed for the solution of the problem.

d) Diffusion of this knowledge, in particular, the evolution of preference structures associated with the core of consistency of the group and the agreement and disagreement judgments and zones between the participants.

e) Elicitation of the new judgments after the results of the first round have been presented to the participants (2nd questionnaire).

f) A final analysis of the changes in judgment from an individual (or participant's) and the global (overall system) point of view provides a measure of the individual and overall learning process and knowledge extraction.

g) Analysis of the responsiveness of the positions of the different participants.

4.1 The design of the pilot study

Before asking party representatives in the various countries, we decided to test the questionnaire in a pilot study. The pilot experiment is conducted with students representing national parties in a country. In the following case, the pilot study was conducted in Vienna in September 2004 and the political opinions are thought to represent the following parties:

1) Austrian People Party (OeVP)

2) The Social Democratic Party (SPOe)

3) The Green Party (Gruene)

4) The Freedom Party (FPOe)

4.2 Results of the first round of the pilot study

This section gives a quick review of the results of the first round, which were obtained with PhD students in Vienna. We aimed at answering the following question: Can the value systems of different parties be brought on a common denominator? The following problem is based on the elicitation of values and criteria that are listed in Appendix B. The first questionnaire addresses the granting of local voting rights to immigrants, the second one the problem of obtaining citizenship.[5]

The first round of data shows that unsupervised elicitations lead to consistency (Saaty, 1980) for each pairwise comparison matrix in the case of "becoming a citizen." For the 4 parties the inconsistency measures CR yield the following values: CR(D1) = 0.03, CR(D2) = 0.01, CR(D3) = 0.05 and CR(D4) = 0.03. Figure 2, obtained with Expert Choice, shows how the 4 criteria have different weights for each party or decision maker (D1 = OeVP; D2 = SPOe; D3 = Gruene and D4 = FPOe).[6]

We see that Culture and Time are the most important attributes. The language variable seems to be the least important variable for the participants if an overall agreement has to be obtained. These conclusions have been obtained supposing that the decision makers accept the aggregation of the judgments as a procedure of resolution. But in this case, we find two groups of participants that strongly opposed preference structures: The order [T>L>S>C] for the first two actors D1 and D2, i.e. the larger two parties, and the order [C>S>L>T] for the other two, i.e. the smaller parties D3 and D4, and therefore direct aggregation is highly questionable.

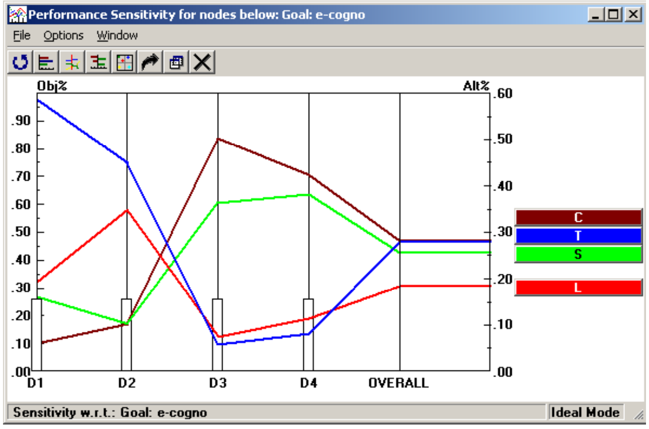

Fig. 2: Performance of criteria for becoming a citizen

In the second questionnaire on obtaining voting rights, the pairwise comparison matrices elicited by the parties also have an acceptable inconsistency: CR(D1) = 0.01; CR(D2) = 0.06; CR(D3) = 0,16 and CR(D4) = 0.10, i.e. 3 of them are below 0.1 except party D3 (The Greens). Figure 3 shows that the Social and Cultural variables have a greater relative importance for finding an agreement than the other 2 variables.

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[5] Note that it would be more in the spirit of *e-cognocracy* if the decision problem would be on obtaining rights for *e-participation* and *e-voting*. But these options are considered to be too abstract and not viable in the present state of our political system.

[6] OeVP = Austrian Peoples Party, SPOe = Social Democratic Party, FPOe = Freedom Party, Gruene = Green Party.

In the voting case, the actors D1 and D3 ([C>S>L>T]), together with D2 ([S>C >L>T]), are opponents to D4 ([T>L>S>C]), the Freedom Party. Similar to the previous questionnaire on citizenship, the direct aggregation is questionable. Thus, the analysis shows that we need a second round of elicitations to get a better basis for decision making between the participating parties. This type of interactive and iterative information processing can be important if responsible participants seek compromises between different value judgments and conflicting points of view.

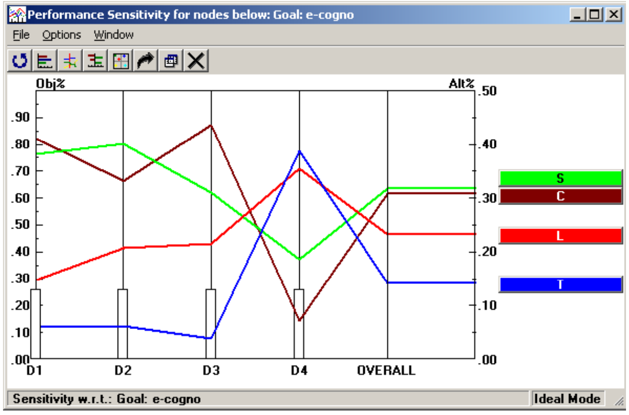

Fig. 3: Performance of criteria for obtaining voting rights

5. Conclusions

This paper demonstrates the feasibility of solving a society's problems in decision making by the AHP method, a decision making tool for "analytical hierarchical processes." We think that the concept of *e-cognocracy* allows citizens to accumulate knowledge by the problem solving process through the Internet. This process benefits two perspectives: one for the home and one for the host country.

Following the AHP approach, we find quantitative values for the size of the thresholds for the different attributes considered that recommend how and at which level to incorporate the immigrant in both countries, how to combine the participation in both countries and the three contexts of the participation scale: local, regional and national. The intention is to open a way to enrich the political culture of *e-governance* by allowing new citizens to participate at the same time in the public life in two countries, i.e. allowing them to exercise their political and democratic participation rights depending on the degree of integration. We argue that this is a new and innovative way to capture and utilize the individual experiences in as many contexts as possible following the general concept of *e-learning* and *e-knowledge* accumulation in the scope of *e-cognocracy.*

The objective of the paper was to show that an *e-cognocracy* process is always in search for knowledge – in the present application for knowledge as how to integrate citizens into the society. In this way we try to make decision makers or politicians think about the criteria that are important for future decision making which could depend on the local (regional or national) circumstances. To obtain results in the decision problem more directly, we will use *e-cognocracy* and the Internet to obtain the opinion of the different groups like those that we have previously identified by a pilot study.

Such a procedure can lead to new results and insights. Also, it increases the knowledge in public administrations about the different ways of integrating migrants in both countries, the home and the host country. With the on-line presence of migrants with the help of the Internet we build a new meta-structure of knowledge. In total, we increase the *e-knowledge* of our democratic society but at the same time we train ordinary people and politicians to solve problems using the new (internet or on-line) tools of multi-criteria decision-support systems.

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