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An innovative approach about the analysis of quality and efficiency in Italian law

Un approccio innovativo sull'analisi della qualità ed efficienza nella giustizia italiana

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Abstract

A lot of information about processes is today available on internet, then it is possible to retrieve documents and produce a digital repository. Thanks to techniques of text mining is possible to extract information useful to reach the task of define a statistical index to describe the quality and efficiency in law. It is also possible to produce an intelligent knowledge base about facts and judgments. In this paper we propose an useful tool to fulfill the essential constitutional principle in the article 111 of Italian Constitution, that concerns the "reasonable duration" of the process, realising also the precept of the art. 6 of the European Convention of Human Rights. This work aims to open some new conjoint debates about the study and application of statistical and computational methods to web data on new forensic topics.

Abstract

Un'enorme mole informativa in merito ai processi è oggi disponibile su internet , di conseguenza è possibile recuperare i documenti al fine di produrre un archivio digitale. Grazie alle tecniche di text mining è possibile estrarre informazioni utili per raggiungere l'obiettivo di definire un indice statistico che descriva la qualità e l'efficienza della giustizia. E' anche possibile produrre una base di conoscenza intelligente su fatti e sentenze. In questo lavoro proponiamo uno strumento in grado di soddisfare il principio costituzionale dell'articolo 111 della Costituzione Italiana, che riguarda la " ragionevole durata " del processo , realizzando anche il precetto dell' articolo 6 della Convenzione Europea dei diritti dell'uomo . Questo lavoro mira ad aprire nuovi dibattiti congiunti circa lo studio e l' applicazione di metodi statistici e computazionali applicati ai dati del web su nuove argomenti forensi .

1 The legal reason of our system

Different are the finalities of the statistical surveys and equally vast are its fields of application. One in particular is very important for our work: the legal world.

In this ambit, in fact, the statistics can give a great help if it is applied to the final product of all trials, the sentence, because, thanks to statistics, it is possible to extract information on two crucial aspects: the duration of a trial and the uniformity of the judges' decisions. These two aspects are fundamental to understand, first of all, how efficient can be our judicial system and, in second place, to understand what is the predominant solution of a certain case by the jurisprudence in a certain historic moment. Our paper aims to create a computer system that, through a statistic analysis based on the legal databases present on the web, examines the different decisions of the judges in such a way that we can obtain these fundamental data: the complex duration of a single trial, the solution adopted by the judge in that case and its correspondence with the other decisions of the judges that have decided the same case. Before proceeding to the analysis of the system, it is necessary understand what is a sentence and how it is structured. The sentence is the measure that the judge adopts whenever he has to decide on the existence or not of the right deduced in the trial, or on any question relating to the merit of the case or to the process, from which it could derive the definition of the trial [1]. With the sentence, therefore, it runs out a phase or a grade of the process and the judge is "stripped" of the case [2].

In the Italian civil procedure code [3], the article 132, headed "contenuto della sentenza", identifies the normal content of a sentence, stating:

"Essa deve contenere:

- 1) l'indicazione del giudice che l'ha pronunciata;
- 2) l'indicazione delle parti e dei loro difensori;
- 3) le conclusioni del pubblico ministero e quelle delle parti;
- 4) la concisa esposizione delle ragioni di fatto e di diritto della decisione
- 5) il dispositivo, la data della deliberazione e la sottoscrizione del giudice".

Among the various elements required by the norm, particular relevance is assumed by the numbers 4) and 5), because expression of the fundamental components of the sentence: the motivation and the device. The motivation, pursuant to article 118 disp. att. italian cpc consists in the "concisa esposizione dei fatti rilevanti della causa e delle ragioni giuridiche della decisione" that is the part of the sentence in which the judge exposes the reconstruction of the facts and the logical-legal reasoning which has led him to the emanation of that decision. The device, instead, represents the part of the sentence in which the judge decides the matter that has been given to him. Thanks to the elements prescribed by the article 132 of the Italian cpc, and in particular thanks to the motivation and the device, it is possible to understand what is the question, or the questions, that have been brought to the judge and how he has defined them. Before proceeding with the analysis of our system, it

is also important specifying that currently an ordinary citizen that wants to know the Italian jurisprudence, can use different legal databases. For the sentences of the Corte Costituzionale, it is possible to consult the free websites www.cortecostituzionale.it and www.giurcost.it, while for the sentences of the Court of Cassation and for the decisions of the judges of merit, it is possible using sites with subscription such as www.iusexplorer.it.

These websites, although useful, have several disadvantages, for example the limitation of the search criteria, that often doesn't allow a specific research of the particular case, and the impossibility of obtaining an automatic calculation of the cases that have been decided in the same way by the judges.

The system that here we propose, instead, using the legal databases present on the web, and identifying the elements prescribed by the article 132 of the Italian cpc, in particular the motivation and the device, it is able to understand in how many cases the judges have adopted that decision and in how many cases they have adopted a different decision, and why they have acted in this way.

Moreover, comparing the start date of the trial and the date of emission of the sentence, it will be able to notice even the duration of the single process and of the other process, giving us some important parameters about the complex duration of a trial in Italy. So from a legal point of view, different are the benefits that we can get from this system. First of all, we would have a system that allow us to know better and more deeply the Italian jurisprudence and, as a consequence, we can get closer to the importance principle of stability and certainty of the law. As stated by the first president of the Court of Cassation, with particular reference to the jurisprudence of the Court of Cassation: "the possibility of knowing the jurisprudence of the Cassation is one of the elements that contributes to the enforcement of the values of the stability and certainty of the law and, therefore, to the construction of a better society". In fact, we don't have to forget that, according to the article 101 of the Italian Constitution [4], "la giustizia è amministrata in nome del popolo" and so it is very important that every citizen is informed as deeply as possible about the different judges' decisions on the various aspects of daily life.

Moreover our system, calculating the majority opinion of the judges about a certain case, and making aware the citizens about the decision of that case, allows them to make a "prognosis" of their question before starting a trial. Just in the case that our system gives to them a positive answer about the orientation of the Court on that question, the citizen will be encouraged to start the trial; while, at contrary, he will be discouraged if he sees that in the majority of the cases the judges have given a negative decision to his request. Our system, therefore, also allow to reduce the burden of litigation and to fulfil, as a consequence, the important precept contained first in the Italian Constitution, the article 111, in which it is stated that every right process must have a "ragionevole durata", and then the European precept contained in the art. 6 of the European Convention of the Human Rights, in which it is stated that "everyone is entitled to a fair and public hearing within a reasonable time". The requirement that every citizen know in advance what could be the decision of his requests, and so the need of a "predictable" jurisprudence, has been underlined both from the first president of the Court of Cassation in his annual relation about the

administration of the justice [5], and from authoritative doctrine that explicitly has declared “ the predictability can play even an economic role, since that if the decision is predictable, you can avoid going to the judge” [6]. Our work also seems to be coherent to the novelty, recently introduced, of getting free accessible, through an archive, the sentences of the Court of Cassation from 2009 onwards [7]. Thanks to this novelty, in fact, the citizens don't have to make a subscription to view the jurisprudence of Cassation, and so they will be better facilitated in using our system, making the objectives above mentioned easier achievable.

2 Evaluation indices of the judicial system

The length of proceedings can be viewed as the result of the interaction between demand and supply of justice. On the supply side, the most significant factors are: quantity and quality of available financial and human resources, organizational and governance structures of the courts, incentives of the involved parties (judges and administrative staff), efficiency in use of the resources: the latter may be influenced by the level of specialization, the dissemination of techniques for managing of flows, or the level of offices computerization. Factors that influence the demand for justice are: the cost of access to the system and the rules for the allocation of costs between the parties, the incentives of the professionals, the spread of alternative mechanisms for dispute resolution, the quality of legislation and the degree of legal certainty.

Although there are exceptions (especially Slovenia and Japan), systems with longer duration of the processes tend to be more expensive. Trial length is estimated with a formula commonly used in the literature [9,10]: $(\text{Pending}(t-1) + \text{Pending}(t)) / (\text{Incoming}(t) + \text{Resolved}(t))$. The total private cost of trial is discounted by the expected probability of receiving legal aid. The cost of trial (as a percentage of the value of the claim, which is assumed to be equivalent to 200% of income per capita in the country) is taken from the World Bank Doing Business database and encompasses three different types of costs necessary to resolve a specific commercial dispute: court fees, enforcement costs and average lawyers' fees. The reduced number of observations is due to data availability.

The costs of access to justice - measured as an estimate of the costs that an entity must incur to get to the resolution of a particular dispute (administrative costs, compensation for experts and lawyers) net of government grant (legal aid state) - vary significantly between Countries. In Italy the normal procedural time, with two investigative hearings, could permit the conclusion of a civil trial in about 460 days (15 months), however this is not possible for the overload of roles and judges: in front of a public expenditure in line with international averages, in Italy there is about 50% less judges and administrative staff but, before the recent mergers, 21% more courts. Public spending on civil justice is € 3,051,375,987, equal to 0.20% of total public expenditure and slightly below the EU average of 0.24%. In contrast, Treasury collects, through the unified contribution, only 10.7% of public spending

on civil justice, against a European average of 28.3%. International comparisons - albeit with caution due to differences in legal systems and the organization of the judicial statistics in different Countries - show a wide variability in the length of the proceedings [8]. In 2010, the estimated average duration of civil proceedings at first instance was about 240 days in OECD Countries, 107 in Japan (the Country with the shorter duration), about 420 in Portugal and Slovenia, 564 in Italy (the Country with the longest duration). The estimated average time to completion of a proceeding in three levels of instance was 788 days, with a minimum of 368 in Switzerland and a maximum of almost 8 years in Italy. The crisis of justice also costs in economic terms: not surprisingly, the World Bank also took care of the situation by calculating in its "Doing Business 2013" report that in Italy, after a record 41 steps in the procedure, 1,210 days are needed to protect a contract, 692 days longer (almost two years) than the average of high income OECD Countries, placing Italy in the 160th place in the ranking of "enforcing contracts", with a cost equal to 29.9% of contract credit (by way of comparison, the resolution of a dispute represents 9.7 % of the value of the dispute in Luxembourg, 14.4% in Germany and 17.4 % in France).

In the EU, public spending accounts for nearly 50% of GDP and the public sector contributes approximately 17% of total employment. Over the years, many Member States have taken steps to improve, on the one hand, the efficiency of public services and, on the other side, the transparency and quality of public administration and the judiciary in particular, improving quality, independence and efficiency of judicial systems, ensuring the conclusion of proceedings within a reasonable time and promoting the use of alternative mechanisms for dispute resolution.

In order to put a stop to all of this, since many years one of the main challenges is to use the web to facilitate transactions and exchange of information between judicial offices and users. ICT promises to transform the justice - and more generally the public sector - increasing the capacity to act effectively, efficiently, transparently and in line with the expectations of the users. The fundamental aspect of public administration's information systems is to be tools created for improving services and supporting knowledge and information of public decisions. The proposed measures are thereby responding to the need to accelerate the civil justice system and avoid further condemnation of the European Court of Justice for breach of the reasonable duration of the process, and to enable a revival of Italy competitiveness, helping to reduce costs for businesses and to make the Country more attractive to foreign investors.

Finally, the length of proceedings is associated with the composition of public spending for justice and some characteristics of the organization and governance of the judicial offices: efficiency gains can result from policies aimed at reducing the rates of litigation. In this regard, and finally, there is scope to reduce the rates of appeal, an approximate measure of the degree of predictability of judicial decisions.

3 System proposed

As described in the first section, the idea at the base of our work is to provide an automatic learning thesaurus of sentences, that is fundamental for the evaluation of the sentence output and of the duration of the justice. As state of the art, it is possible to find some studies about the automatic analysis of the sentences [12], and it is a very important field of study in statistical context [13]. In fact, a crawler, searching on the OSINT data, can extract from legal websites and repositories the text of the sentence. The document is examined by a parser that identifies the structure of the sentence. The sentence obtained can be segmented in two main parts: the “motivation” (that provides data and keywords of the process) and the “pqm” (that provides the sentence output). The keywords of the process are identified thanks to a “semantic knowledge base” [14] for a better text analysis. Thanks to the module of the “sentence segmentation”, it is possible to extract the duration of the process considered, the keywords (input) of the contentious, and the output decided by the judge. These information are inserted in the “sentences thesaurus” that is fundamental to define two indexes : efficiency (related to the duration of the process) and quality (related to the coherency of the sentences). Then, our system is characterized by two scopes : one for the user query (EVALUATION SYSTEM) and one for the automatic updating of the “SENTENCES THESAURUS” (as shown before). The first part is developed as an “user oriented” module by a parser/text analyzer (supported by a “semantic knowledge base”), and a core module (EVALUATION SYSTEM) related to the thesaurus (SENTENCE THESAURUS) that returns the sentence output. The user input can be a list of keywords or a text description as system query “eg. i killed the golden fish of my girlfriend”. In the case of text description, the parser/text analyzer extracts the keywords of the user input, thanks to the joint analysis with the semantic knowledge base. This KB is structured by words related by semantic relations. The keywords extracted become the input of the evaluation system, that provides the query to the sentences thesaurus, returning a sentence output with the relative score (eg. Absolution | Score: 98%) and citing the sentences related to that query. The user module aims also to achieve the target of sharing of information and awareness about Italian jurisprudence and the reduction of relative costs. The two modules presented can also be integrated in a single scheme that shows the logic flows of the automatic (on the right) and manual (on the left) parts (fig.1). In conclusion, the rapid development of information and communications technologies has opened new opportunities for significantly improving the administration of justice, with the availability of web services, the use of electronic filing, the electronic exchange of legal documents, the opportunity to consult the laws and jurisprudence on-line: ICT can therefore be used to improve efficiency, access, timeliness and transparency, helping the judicial authorities to provide adequate services.

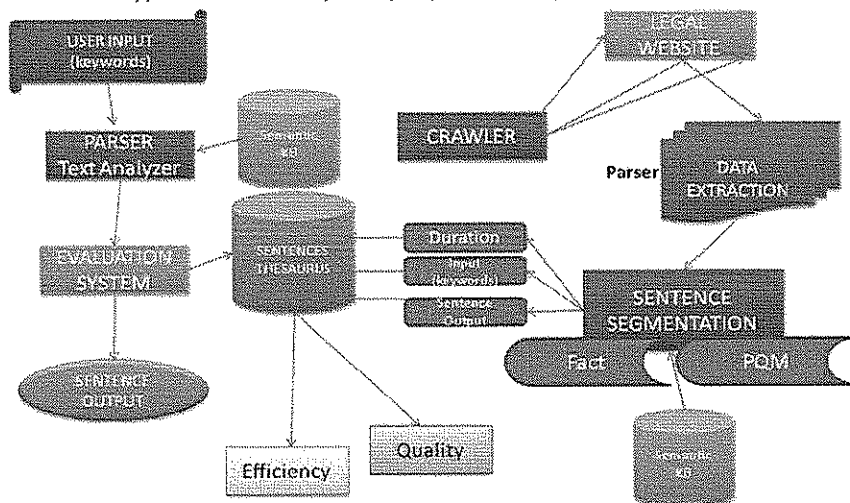


Figure 1: System Proposed

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