

Lawyers and digital development

Introduction

The Fourth Industrial Revolution brings, as in previous industrial revolutions¹, a global transformation of the value chain of the industry by the incorporation of a range of new technologies or “cyber-physical systems”, if we follow Klaus Schwab’s² definition. One of the main concerns of society about this new wave of change is how it will affect human’s work and professions. Principally, the people are trying to figure out which jobs will disappear, which ones will change and which new ones will appear.

In this brief essay, we would like to present some of the actual implications that could arise with the introduction of new technologies in the practice of law. Although the theme is vast and, in some way, unexplored, we believe it is imperative to start making an analysis of the impact that artificial intelligence (AI, for now on) and other kinds of new technological applications will have – and are having- in the world of law.

We will concentrate our investigation in a lawyer’s work, tasks and activities which we consider as the most common in the practice of law. This means that we will set aside the possible changes on the jury, the law schools and the judges. We will see that all the tasks that can be settled with a set of instructions can be easily automated with new computer systems. Those tasks usually correspond to structured or routine activities that do not require a creative criterion or emotional abilities.

After this description part, we will describe the Argentinean case and the possible automation’s consequences.

I) Lawyer’s common tasks and possible changes

a) Administration and management tasks

¹ “First an era dominated by steam and mechanical production, what we commonly know as the industrial revolution, followed by the mass production paradigm that dominated the electric age, then IT and finally cyber-physical systems that can be seen as distinct era because of its velocity, scope and system impact” (Michael A. Peters, “Technological unemployment: Educating for the fourth industrial revolution” Published online: 07 Aug 2016. Available in <https://doi.org/10.1080/00131857.2016.1177412>

²“The Fourth Industrial Revolution, by Klaus Schwab” <https://www.weforum.org/about/the-fourth-industrial-revolution-by-klaus-schwab>

Here we are talking about essentially tasks related to budgeting, billing, assigning and monitoring workflow, retaining experts, and managing contracts that are usually performed by paralegals or assistants.

Dana Remus and Frank Levy³ emphasize that there are programs, such as Machine Learning, to perform certain parts of contract management currently performed by lawyers. The Kira System offers software that pulls analogous provisions from different contracts into summary charts and compares particular provisions or entire documents, highlighting different contracting strategies.

Nonetheless, after the use of this two technological applications there still is a need of human touch. For example, to monitor the subordinate's job and deal with the other parties of the contract.

Therefore, for Remus and Lavy, the technologies related to administration and management tasks only have a moderated impact.

b) Document Review

This type of tasks –again, usually performed by paralegals or assistants- consists in reviewing documents for purposes of discovery in litigation or government investigations. This means, essentially, to search for jurisprudence or judicial precedents or any document that could be relevant for a particular.

There are many predictive coding algorithms, where a single pattern of linguistic features is used to classify an entire set of documents. These algorithms consistently achieve higher rates of recall and precision in document review than human lawyers can reach. This inevitably leads to unquestionable impacts on the demand for lawyer labor⁴.

In the Richmond Journal of Law & Technology, Dov Greenbaum pointed out that semantic search –instead of keywords search- allows the use of natural language queries. Thus, the computer responds semantically with relevant legal information.

Nowadays technologies as Ross Intelligence enable users to obtain legal answers from thousands of legal documents, statutes, and cases. Ross is a cognitive computing

³ Dana Remus and Frank Levy (2016) "Can robots be lawyers? Computers, lawyers, and the practice of law. Available at <https://ssrn.com/abstract=2701092>

⁴ Op cit.

platform, meaning that it learns from past interactions and becomes more useful the longer it is used by lawyers. IBM's Watson Debater can autonomously scan its knowledge database for relevant content, 'understand' the data, select what it believes to be the strongest arguments, and then construct sentences in natural language to illustrate the points it previously selected, both in favor and against the topic. JPMorgan announced that it is using software called Contract Intelligence, or COIN, which can perform document review tasks that took legal aides 360,000 hours⁵ in just a few seconds.

In this particular task, Remus and Levy designated the technological impacts as strong. We are talking about a significant reduction of work time and the possible disappearance of one of the main tasks that lawyers do and that clients pay for. Nevertheless, there is still a need for attorneys to guide and train the system's parameters and select the more relevant documents for the particular case and defend the outcome arguments in court. In other words, there is a need for someone to supervise the machine, but not someone to do the job that the machine can do by itself.

c) Due Diligence

Even if in the due diligence process there is a lot of document review that, as we have discussed, is more permeable to automation by new technologies like Ross Intelligence and IBM's Watson Debater, this particular job entails investigating and reviewing a particular client, entity, or situation to ensure comprehensive understanding of all factual and legal issues relevant to a proposed deal or transaction⁶. This results in a lot of unstructured components that still need a human brain to piece together in a more complicated scenario. Which is why the impact here is lighter than in document review.

As stated by Remus and Levy, "[t]he human mind can draw correct inferences from very limited information, allowing a human lawyer to use context, analogies, and common sense to identify a contractual reference as a problem even if the reference was unanticipated". On the other hand, existing machine learning software will only identify

⁵ Erin Winick "Lawyer-Bots Are Shaking Up Jobs" in MIT Technological Review. Published online: December 12, 2017. Available at <https://www.technologyreview.com/s/609556/lawyer-bots-are-shaking-up-jobs/>

⁶ Dana Remus and Frank Levy (2016) "Can robots be lawyers? Computers, lawyers, and the practice of law. Available at <https://ssrn.com/abstract=2701092>

the reference as problematic if something related to the problematic language was anticipated and included in the training data.

d) Document Drafting and legal writing

Document drafting is the production of legal documents such as deeds, contracts, wills and trusts, that reflect the intent and agreement of the parties as accurately and unambiguously as possible. Legal writing, as distinct from legal document drafting, is the production of written work that characterizes the state of the law and/or its application to a particular factual situation⁷.

This distinction is important because in the first case there is, unfailingly, a structured task that is usually accompanied by legal forms. In this way, lawyers will input in the system the particular information that is relevant for the specific case and the AI program, such as Machine Intelligence, will do the rest. In contrast, legal writing has no formal structure and thus, needs the creativity and sensibility of the human mind.

Again, present day AI cannot work on creative tasks. On the other hand, structured tasks can be easily done and only needs someone to manage the machine –in this case, to input the particular information- but not someone to waste time doing what a machine can do faster.

e) Legal analysis and strategy

In this kind of tasks, lawyers have to look at a determinate situation and judge it appropriately. In this way, they can plan a suitable strategy. To do so, it is necessary to predict the different outcomes that a specific case could have.

Software, such as Lex Machina can analyze massive amounts of data and produce statistical models, similar in structure to an equation. It combines the searching of data – which we have already discussed- and analyzes it in order to predict different outcomes for a particular situation⁸. Thus, they offer the possibility to lawyers and law firms to

⁷ Op. Cit.

⁸ Daniel Ben-Ari, Yael Frish, Adam Lazovski, Uriel Eldan, and Dov Greenbaum (2017) "Danger, Will Robinson"? Artificial Intelligence in the Practice of Law: An Analysis and Proof of Concept Experiment, 23 Rich. J.L. & Tech. 3. Available at http://jolt.richmond.edu/index.php/volume23_issue2_greenbaum/.

gain a better and deeper understanding of the risks and costs associated with different cases, investments or projects⁹.

Remus and Levy emphasize that, nowadays, these systems can only work in cases with a low level of complexity with few variables. That's why in those complex cases, a lawyer and his expertise is still needed.

f) Negotiation, court appearances and litigation

To carry out negotiations, court appearances and litigations, factors such as body language and verbal language are still necessary and cannot be replaced by a machine or another AI system. These tasks require an emotional engagement to perceive the other party intentions, lies, real interests and concerns.

Thereby, new technological systems may eventually play a larger role in aiding lawyers during these tasks by helping attorneys to analyze the other party's facial expressions, voice tones, etc. Still, the impact is low.

II) The situation in Argentina

The practice of law in Argentina is mostly focused around Buenos Aires, the capital city. The majority of law firms are medium sized, this means that they count with less than 25 lawyers and more than 10. In Argentina there is no matriculation process. This means that as soon as one lawyer graduates from university he or she can exercise as a lawyer. As a result, there is an abundance of lawyers in the market.

Larger sized law firms, with more than 25 lawyers, have a similar structure to North American law firms. They are organized in several different departments (civil law, liability, IP, penalty law, business law, environmental law). Junior lawyers (beginners) usually start out by researching information and doing some document drafting required by the specific area or department they are assigned to. Furthermore, it is common to establish a rotation through the different areas or departments so new lawyers can familiarize themselves with the work performed by the law firm. For professional growth, there are pre-established steps to follow. Once they pass this beginner step, lawyers start doing some negotiation work, legal writing and planning strategy. Usually,

⁹ Dana Remus and Frank Levy (2016) "Can robots be lawyers? Computers, lawyers, and the practice of law. Available at <https://ssrn.com/abstract=2701092>

the big firms don't pay much for the beginner type of work. Therefore, it is uncommon for new lawyers to spend much time in the same law firm as there are better jobs available in the market which offer better remuneration and more professional enrichment.

On the other hand, medium sized law firms have a more flexible structure. This results in a relaxed and straight relationship between a partner and a beginner lawyer. In contrast with large sized firms, there are no established steps for professional growth, so the possibilities of promotion are uncertain. The tasks carried out by beginners depend on the firm and the partners, but the vast majority is composed of both document research and document drafting.

Apart from large and medium sized firms, there are a few international firms with subsidiaries in Argentina such as Curtis and Baker and McKenzie. Similar to large sized firms, they adopt the North American model with department divisions. However, beginner lawyers do more complex work as in the medium sized firms.

Finally, there is the public sector, which is characterized for offering high salaries and job stability. In this sector, there is a lot of simple work such as document drafting and document review. The judicial records needed to follow the different cases are available in a web system for the Ciudad Autónoma de Buenos Aires, but not in the rest of the country. This lack of digitalization means that the only way to look after files or judges sentences is through manual labor without any technological support. This situation becomes a stick in the wheel for efforts to implement any kind of advanced technology. This is especially true for technology that aids in document research.

Due to the better working conditions in the public sector, good lawyers tend to prefer a public job. This is because the public sector offer higher salaries, higher job stability and shorter working days.

III) Conclusions

As we said before, automatization is more likely to gain relevance in those tasks that are structured, have no deviation and can be resolved by means of a set of instructions.

In Argentina, a significant number of lawyers work in data research. As we previously discussed, data research can be largely automated. Currently, this is usually performed

by beginner lawyers in large sized firms, and partially in the medium sized firms. Document drafting is also a common task carried out by beginners, independent of the size and type of firm.

As AI systems gain relevance, these type of law firms should start making changes in the tasks given to beginner lawyers. Start training them in AI systems and, if is needed, fire people (to keep being competitive in the market).

But, how long will this type of scenario take to appear? The public sector has a huge importance in Argentine and most of the files and sentences used by the lawyers leading with cases have not been digitized. Thus, the first step towards this change has not yet been taken.

Regarding the private sector, we should think that what Argentina's firms have not done perhaps others have, increasing the chances that they will become the new leading firms in the future. Advanced technology and AI systems facilitate, without any doubt, a cheaper way of production and the ones who make the first move towards the usage of these new technological applications will lead the market. As James Yoon, a lawyer in Palo Alto (California) said for The New York Times¹⁰ "What clients don't want to pay for is any routine work". Thus, the market will lead itself to the use of new technologies sooner or later.

Regarding the public sector, the process to incorporate technology will take longer because of the argentinian situation and the severe lack of digitized information. In any case, there is no doubt that the digitization of files and sentences is a faster way to carry on the justice process for the people who needs it, specially for a country as Argentina, whose take too much time to resolve cases. The cheaper way to make justice is, at the same time, the most fair one.

¹⁰ The New York Times "A.I. Is Doing Legal Work. But It Won't Replace Lawyers, Yet." Available at <https://www.nytimes.com/2017/03/19/technology/lawyers-artificial-intelligence.html>