

Article

The Legal Profession in the Era of Digital Capitalism: Disruption or New Dawn?

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Abstract: This article investigates the impact of what we label “digital capitalism” on the structure and organization of the legal profession. We explore whether the rise of digital capitalism is transforming the dynamics of the legal field by the introduction of new actors and ways of practicing law, which might challenge the traditional control (and monopoly) of jurists on the production of law. We find that not only have new service providers already entered the legal market, but also new on-line tools for solving legal disputes or producing legal documents are gaining a foothold. Similarly, we also find that new intelligent search systems are challenging the role of junior lawyers and paralegals with regard to reviewing large sets of documents. However, big data techniques deployed to predict future courts’ decisions are not yet advanced enough to pose a challenge. Overall, we argue that these developments will not only change legal practices, but are also likely to influence the internal structure and organization of the legal field. In particular, we argue that the processes of change associated with digitalization is further accelerating the economization and commodification of the practice of law, whereby lawyers are decreasingly disinterested brokers in society and defenders of the public good, and increasingly service firms at the cutting edge of the capitalist economy. These developments are also triggering new forms of stratification of the legal field. While some legal actors will likely benefit from digitalization and expand their business, either by integrating new technologies to reach more clients or by developing new niche areas of practices, the more routinized forms of legal practice are facing serious challenges and will most likely be replaced by technology and associated service firms.

Keywords: digitalization; digital capitalism; the legal profession, digital society; new capitalism

1. Introduction

Popular writings are already predicting the rise of a new societal form: the digital society. In most accounts, this phenomenon is presented as a further development of an already increasingly networked society, triggered by massive technological advances in the realm of communication and handling of data. There is little doubt that the current technological advances in terms of digitalization, big data, and artificial intelligence (AI) have important societal consequences.¹ One key societal institution that is likely impacted by these developments is law and, relatedly, the legal profession.² Law, whether understood as a profession, a method of solving disputes, a tool to achieve justice, a superstructure in the hands of the powerful to protect their interests, or, more simply, an instrument to guide human behaviour, is at its core an intellectual endeavour that depends on handling, storing,

¹ See, for instance, (Schwab 2017) See, also (Sennett 2006).

² For an informed discussion on how digitalization may impact the legal profession, see (Assion 2017).

interpreting, and sharing knowledge as well as information. Recent advancements in digital technology are precisely transforming the ways in which information is created, stored, and conveyed. Moreover, these developments are making inroads into artificial knowledge production, thereby potentially entering the intellectual and human aspect of law.

While triggering changes in institutions, practices, and values, these new developments also offer new possibilities and challenges to the legal profession.³ For instance, when neuroscientists and IT experts work toward refining the ways in which AI can be of practical use for lawyers, many are left wondering whether the latter will be effectively replaced by robots, computers, and new forms of machines not yet conceivable or whether the intellectual and normative elements of law will limit these influences simply because certain human faculties of judgment are unique and not (yet) digitalisable. At least for now, the complete replacement of jurists by AI seems an unlikely scenario. Yet, the gradual introduction of new digital technologies in the field of law is likely to alter balances of power and professional practices, and even the organizational structure of the field. As we show in this article, many aspects of digital society are already making their way into the legal field with transformative impact on the organization of legal labour.

Assessing the full range of societal transformations that is prompted by the increased digitalization of society entails answering a set of big questions on the overall transformation of society. In this article, we limit our investigation to assess the impact of what has been labelled “digital capitalism” on the structure and organization of the legal profession. Digital capitalism is the latest transformation of the capitalist system of production in which digital technologies constitute “the central production and control apparatus of an increasingly supranational market system.”⁴ In other words, capitalism is digital when the production process of a certain commodity is performed by and through privately owned digital technologies.⁵ In the context of law and the legal field, digital capitalism implies the introduction of profit-driven digital processes of outsourcing, automatization, dispersion, and commodification in the practice of law. Using the notion of digital capitalism as a framework for understanding the possible impact on legal work of new digital technologies allows us to explore how these developments may have consequences, not only for the practice of professional legal work, but also for the underlying organization and structure of the legal profession. Our objective is, basically, to explore how surface-level changes in practices are having a deeper impact on the structure of the legal field.

Our hunch is that digital capitalism is transforming the dynamics of the legal field by introducing new actors, which challenge the traditional control (and monopoly) of jurists on the production of law. In particular, as the production and application of law becomes increasingly interlaced with digital media, major privately owned non-legal companies are increasingly entering the legal field, with significant consequences for the latter’s socio-political dynamics and power relations. Inspired by the seminal work of sociologists such as Luc Boltanski, Éve Chiapello, and Richard Sennett on the new culture of capitalism, we explore how changes in the capitalist forms of production have cultural, organizational, and societal implications, not only for the practice of the law, but also the work environment and the legal professional’s daily life.⁶ Finally, by taking digital capitalism as our overarching framework, we measure the market effects of these innovations. We are particularly interested in assessing which segments of the legal profession might respectively gain and lose from these changes and how these developments might result in new forms of stratification of the legal profession.

The present article is, however, limited to studying the effects of digital capitalism on law firms and offices, and to a lesser extent on legal counsels working in corporations. We also leave out the

³ See, for instance, (Katsh 1995; Susskind 1996, 2013; Staudt and Lauritsen 2013; Susskind and Susskind 2017; Rostain 2017).

⁴ (Schiller 1999, p. xvi).

⁵ (Pace 2018).

⁶ (Boltanski and Chiapello 1999; Sennett 2006).

host of issues related to the introduction of AI, big data, and digitalization in the public sector and state bureaucracies. We, thus, do not address questions related to how digitalization might indeed change the nature of legislation and reduce the need of legal analysis in the future. We leave that for future explorations by ourselves and others, and limit the present article to a first stab at analysing one part of what is a much larger object of inquiry. Moreover, in this article, we mainly focus on developments in the Anglo-Saxon world, although, we do include examples from other places that are first movers, such as France and Denmark. Surveying developments in this area, we quickly figured out that Anglo-Saxon law firms are at the forefront of the digital transformation of law. Although linguistic differences impact the diffusion of new legaltech outside the English speaking world, it seems likely that the developments in Anglo-Saxon law firms are likely to influence other countries in this regard.

A final limitation of this work is that the analysis is exploratory in nature. We cannot claim to provide full empirical coverage of our object of study as we, in most cases, rely on secondary literature. Our overall approach has been to unpack the many claims made about legaltech by collecting data on the products offered and their place in the legal market. In many cases, this has involved visiting and scrutinising the websites of the service providers and finding secondary literature—often web-based newspaper articles—assessing the standing of the products in the legal market. A full-blown empirical investigation with questionnaires and interviews would obviously have yielded an even deeper understanding of the phenomenon. Yet, by mapping developments in legaltech and formulating some preliminary conclusions as to their effects, we hope that this pilot study have laid the groundwork for new and deeper investigations. Moreover, we hope that our first attempt at surveying broad developments in legaltech helps introduce some basic distinctions among the various products and practices typically all placed under the same umbrella.

Notwithstanding these limitations of the present study, our analysis suggests a set of conclusions. There are solid reasons for claiming that, in the long run, the current transformations of the legal field prompted by digital capitalism are likely to have a significant impact on the structure of the legal profession and on legal practice as a whole. At the moment, however, we note that some of the new technologies—notably those related to AI—are only in an embryonic stage and endorsed by legal professionals in a scattered manner. Nevertheless, the potential of some of these technologies is striking. The further development of digital capitalism, and the related rise of a digital society, is likely to influence the structure of the legal field in the sense that it will accelerate already on-going processes of change with regard to the legal profession. This includes, notably, that digitalization is further accelerating the economization and commodification of the practice of law, whereby lawyers are decreasingly disinterested brokers in society and defenders of the public good, but increasingly service firms at the cutting edge of the capitalist economy. These changes are also triggering new forms of stratification in the legal field. While some legal actors are benefiting from digitalization and expand their businesses, either by cleverly integrating new technologies to reach more clients or by developing new niche areas of practices, the more routinized forms of legal practice are facing serious challenges from new technology-driven solutions and actors. What is apparent from this study is that the ways in which new technologies are impacting legal practice is influenced by its introduction through market-driven rationales. In other words, the digital transformation of legal practice is not as such driven by digitalization, but rather by the combination of digital solutions and capitalism. This also means that these dynamics are not driven by, for example, democracy or by transparency concerns; they are essentially driven by profit interests.

This article is structured as follows. The bulk of the article provides an overview of the different forms that digitalised lawyering is taking. In the first section, we discuss the new forms of organizational models driven by profit-rationales such as Legal Process Outsourcing (LPO) and Alternative Legal Service Providers (ALSP). We then turn to what might be termed “eLawyering”. In this section, we explore the recent developments concerning On-line Legal Platforms (OLP) and Online Dispute Resolution (ODR). In the third section, we survey evolutions in the use of AI in law.

Against the background of these three sections, we conclude with a general discussion of the possible transformative impact of these innovations on legal practice and the legal field.

2. Digital Lawyering: Forms and Practices

This section explores, documents, and analyses new forms and practices of digitalized lawyering. First, we investigate developments with regard to the so-called Legal Process Outsourcing and Alternative Legal Service Providers. These are developments that essentially seek to cut costs of legal services by introducing new technological solutions, or using technological advances to introduce new and cheaper legal services and providers. Second, we focus on new forms of internet lawyering (eLawyering), a development that is also largely driven by market objectives and that introduces affordable solutions for legal advice (On-line Legal Platforms) and conflict resolution (Online Dispute Resolution). Third, we discuss developments related to legal robotics (Big Data and AI) and their potential impact on a variety of legal practices.

2.1. Cutting Costs: Legal Process Outsourcing and Alternative Legal Service Providers

The application of new technologies to legal work is, in principle, no different from what can be observed in other business sectors. Yet, because of the status of legal practice as a high-end consultancy service, this creates a particular tension between the traditional providers of (costly) legal work and alternative (cheaper) suppliers. Regardless of the historic monopolies of legal practice, the profession has long been wary of the potential negative effect of the rise of competitors able to offer legal services at cheaper costs. Until recently, the confrontation between big law firms and large consultancy companies has been the key conflict for the legal profession.⁷ Yet, in the last few years, other alternative service providers have also found their way into new fields of legal practice—for example, in the field of the environment—with important consequence for the legal profession and the legal field.⁸

Overall, this competition has made law firms interested in investing in solutions that, while maintaining the organization of the law firm as key actor in the legal field, integrate new technologies in the structure of the firm to lower costs and keep competitors at bay. Of particular interest in this regard are the two, now already “old”, organizational technologies that, for a while, have been available to the legal profession, namely LPO and ALSP.⁹ Their introduction was driven by their promised gains in terms of increased flexibility, efficiency, and lowering of costs. Yet, both technologies came with organizational implications for the legal profession, as they introduce reconfigurations in the structure and organization of law firms. While law firms have traditionally been based on a very hierarchical organizational model with the partners at the top¹⁰, these new technologies allow for a more horizontal, flexible, and dispersed organization, in which lawyers operating in different global locations contribute to the same case.

LPO essentially consists of subcontracting legal work from high-cost locations to sites where the same work can be executed at a significantly lower price. This is often done by subcontracting the work to Third World and developing countries. Thus far, India, Chile, Hong Kong, Australia, the Philippines, and Sri Lanka have been the most frequent locations for outsourcing legal work, at least from the US and the United Kingdom.¹¹ Nearshoring to cheaper locations and providers that are geographically closer, including locations inside the home countries of law firms, is increasingly becoming an option. LPO dates back to the 1950s, when it was pioneered in relation to patents, a rather routinized form of

⁷ (Dezalay 1990; Dezalay and Sugarman 1995).

⁸ (Dezalay and Madsen 2006).

⁹ Other and older technologies include various on-line databases for legal materials and literature such as LexisNexis and Westlaw.

¹⁰ See the classics (Galanter and Palay 1991; Nelson 1988).

¹¹ (Noronha et al. 2016).

legal work.¹² A more recent version of the LPO is ALSP, which occurs when legal services are offered via a model that departs from the traditional law firm, for example, by using contract lawyers, process mapping, or web-based technology.¹³ Both of these approaches have developed over the past 20 years and are largely due to the advancements in real time communication between different parts of the world in combination with an increased competition in the market of law. Yet, by turning to these services, law firms have had to rethink their organization and identify units that, broadly speaking, were fit for outsourcing.¹⁴

As noted, these services are mainly driven by economic interests. This is also the selling point advertised by the suppliers. An example is *Virtualemployee*—a company specialized in outsourcing all kinds of services—which brands itself as the first online employee supermarket and provides a pledge to “save 72% on your next employee by outsourcing to India.”¹⁵ Outsourcing is, however, also driven by the need for expertise, or simply extra hands, when law firms have to deal with the increased volume of global transactions and data involved in some litigation.¹⁶ Particularly the latter has triggered the development of firms which can help review large amounts of documents. LPO and ALSP firms have specialized in using platforms such as *Recommind* and/or *Axcelerate*, which can be accessed remotely from any standard browser and provide some automated functions that help speed up otherwise lengthy and complex tasks involving large data.¹⁷

Although the outsourcing option seems obvious, it is so far only a limited success. Law firms have generally restricted themselves to outsource repetitive and discrete tasks, such as document review, preparation of deposition questions and of testimony, preparation of motions, arguments at trial, patent research, e-discovery, contract management, due diligence, and other similar issues. Recent reports indicate, however, that some law firms and companies have begun to entrust particularly Indian law firms and other legal outsourcing companies with more complex responsibilities, such as legal briefs and court pleadings.¹⁸ The Indian firm *SDD Global Solutions* (now, *SmithDehn INDIA*) was involved with a defamation lawsuit in California over Sacha Baron Cohen’s comedy show.¹⁹

Already more than a decade ago, a few outsourcing companies had developed a foothold in the legal market. According to the newspaper *Le Monde*, the large French company DuPont already used Indian legal consultants in connection with the patenting of their new chemical products in 2005.²⁰ A year later, a Danish newspaper reported that DuPont was about to save huge sums on using Manilla-based lawyers to prepare a lawsuit, which involved reviewing roughly two million documents. Similarly, in the same period, the *Wall Street Journal* highlighted that US law firms were eagerly exploring how to use Indian lawyers, who had the double advantage of earning only about a tenth of a US lawyer and being able to understand American law because of their English common law educational background.²¹ At that point, some other early movers with regard to in-country outsourcing included the Dallas-based *Atlas Legal Research*.²² The company was founded in the early 2000s by an Indian-born attorney, Abhai Dhir, and became immediately a success, increasing its revenue by 20 percent annually since 2001. Since then, *Atlas* has hired and trained legal professionals in India to write legal briefs for American law firms at a very competitive price. At its height, the

¹² See (Ribstein 2012).

¹³ See the 2017 report of Thomson Reuters, Georgetown Law Center for the Study of the Legal Profession, and University of Oxford Said Business School entitled ‘Alternative Legal Service Providers: Understanding the Growth and Benefits of These New Legal Providers’ ([Alternative Legal Service Providers: Understanding the Growth and Benefits of These New Legal Providers 2017](#)).

¹⁴ (Susskind 2008).

¹⁵ <https://www.virtualemployee.com> (accessed on 20 December 2018).

¹⁶ See ([Alternative Legal Service Providers: Understanding the Growth and Benefits of These New Legal Providers 2017](#), p. 2).

¹⁷ <https://www.axcelerate.com.au/> (accessed on 20 December 2018).

¹⁸ See (Pfeifer 2018).

¹⁹ See, (Reisinger 2016).

²⁰ (Madsen 2005).

²¹ (Madsen 2005).

²² <http://www.atlaslegal.com/> (accessed on 20 December 2018).

company counted 45 members of staff based in its main office in Bangalore, India. Interestingly, after the recent global economic crisis, Abhay Dhir decided to move much of his business back to the United States and started to subcontract American lawyers to perform the tasks formerly done overseas.²³

Another central early company in this line of business was *Pangea3*, which is now part of *Thomson Reuters Legal Managed Services*. This firm provides services such as document review and analysis, trial preparation, regulatory change management, financial trade documentation, and contract management.²⁴ Similar services are also provided by: (I) *Mindcrest*, founded by two former McGuire Woods partners in 2001; (II) the Indian-based *SmithDehn* (former SDD Global Solutions Pvt. Ltd), which lists among its clients large corporations such as HBO, Calvin Klein, Sony Pictures, and BBC Worldwide;²⁵ and (III) *Quislex*, with offices—by them defined as “execution centers”—in Chicago, New York City, and Hyderabad, India. Notably, the office in Hyderabad, which has about 1000 full-time employees, is responsible for executing the majority of tasks, and it is divided in several multidisciplinary teams, which include data analysts, statisticians, process experts, software developers, linguists, and technologists. The smaller offices in Chicago and New York are instead dedicated to review the work done in Hyderabad and to conduct more specialized tasks.²⁶

Although we can see a clear growth in these kinds of service firms, it would be premature to conclude that they have changed the legal business as such. Where we do find changes, and where we potentially see further changes, is at the organizational level. Generally, these new opportunities allow for the introduction of new forms of economic rationality in the business of law that formerly were almost unknown. We know that the model of the large law firm and its associated to-the-top-or-out logic in terms of the race towards partnership was already modified during the 1980s in the United States to accommodate both internal pressure and market demands. Notably, the introduction of non-equity partners, senior associates, and similar categories of lawyers did suggest a new more complex organization.²⁷ This new organizational form was then exported to other parts of the world, most notably, in Europe in the late 1980s.²⁸ In the same period the use of so-called ‘lateral hiring’,²⁹ the growth of the professional figure of paralegals,³⁰ and the usage of “temporary attorneys”³¹ brought further changes to the organization of law firms.³² The new developments in the fields of LPO and ALSP and their integration into the operation of law firms is, in many ways, a logical next step in this transformation. More generally, it signals a change from the traditional politics of professionalism³³ to a new—mostly market-driven—professional (and to some extent even sub-professional) culture.³⁴

The implications at the organizational cultural level of delegating legal work to LPO and ALSP seem also to entail a change in the lawyer–client relationships. First, outsourcing raises a host of legal questions with regard to client confidentiality. The challenge is that, by storing data on third parties’ servers or communicating with clients via email, lawyers give up a certain amount of control over the documents and information, yet remain obligated to safeguard their clients’ information to preserve the attorney–client privilege. We will not tackle these legal questions here, but only flag that there are inherent legal and ethical problems related to outsourcing legal work. Another change triggered by LPO and ALSP concerns is the nature of legal work. LPO and ALSP change the idea of legal work

²³ (Schlachter 2013).

²⁴ <http://legalsolutions.thomsonreuters.com/law-products/solutions/legal-outsourcing-services/Pangea3> (accessed on 20 December 2018).

²⁵ <http://www.smithdehndia.com/> (accessed on 20 December 2018).

²⁶ <https://www.quislex.com/> (accessed on 20 December 2018).

²⁷ (Regan 2004) See also (Madsen 2008; Regan and Heenan 2010).

²⁸ (Dezalay 1992).

²⁹ (Heinz et al. 2001).

³⁰ Paralegals, basically, offer cheaper labour for carrying out the more routinized parts of legal work. See (Madsen 2008).

³¹ Namely, lawyers working on a contractual basis for a limited period. See (Berman 1988).

³² (Brooks 2011).

³³ (Abel 2003).

³⁴ (Boltanski and Chiapello 1999).

from that of an expert service to one becoming more of a commodity. This pushes the legal profession to be more driven by the maximization of profits, rather than by the more traditional notions of justice, public good, rule of law, and fairness. If taken too far, there is little doubt that this will not only lead to a certain de-professionalization of the practice of law, but also, and above all, to a legal job market increasingly marked by new experts, such as, among others, consultants from legaltech companies.³⁵ Finally, LPO and ALSP contribute to the geographic differentiation of the legal field. Large law firms are likely to remain in the metropolitan areas and consolidate their position by exploiting opportunities arising from technological innovations and the subcontracting of legal work to cheaper locations of production. Their elite status will not be challenged, unless they fail to engage with new tech and organizational opportunities. They might become smaller in size, but are still likely to offer very high-paid jobs to their lawyers. At the other end of the continuum, a less distinct group of various subcontractors or alternative service providers is already in the making. These are new forms of legal, para-legal, and IT legal workers who will operate out of the periphery, or in the poorer sectors of the centre. In other words, they are likely to represent the poor segment of the new capitalism described by Richard Sennett in his seminal book on the new culture of capitalism.³⁶ The profession will evoke the successful firms when defining its image as a profession, and the segment of sub-contractors is likely to be seen as simply back office functions—and that, regardless of their increased importance and value to the production of law. This means that the kind of reciprocity, trust, and common ideals, that has marked the legal profession historically, is unlikely to extend to this new segment of semi-lawyers, who will then be marginalized by the elite of the profession.

2.2. *Lawyering in the Cloud: eLawyering and Online Legal Platforms Dispute Resolution*

Somewhat linked to the described developments is the emergence of new forms of legal practice which use digital innovations to offer on-line lawyers or legal services. In terms of legal professional characteristics, an e-lawyer is someone who combines legal skills with some insights in new technologies to offer lawyering on the web. Some commentators have termed this kind of lawyer the T-shaped lawyer, a new type of legal professional who combines a legal background with other forms of knowledge, in this case insights into, for example, information technology and data analytics.³⁷ More concretely, eLawyers are attorneys who, by using web-based software, are able to work from anywhere, and not only in their firm's offices.³⁸ This is made possible by the creation of digitised documents and cloud computing software that can be accessed from any internet-enabled device. The practice of eLawyering dates back to the early days of the internet when websites such as <http://www.visalaw.com> first appeared.

However, not all eLawyering is about offering legal services on-line. The introduction of web-based software technologies to legal practice more generally has, in itself, had a significant impact. It enables lawyers to work around the clock and out of the office and to meet their clients at any time and location. While such technology was initially used mainly by large firms, the 2015 American Bar Association Legal Technology Survey Report suggests that 72% of solo and small American firms have now adopted some form online document storage. This suggests that, at least in the US, lawyering in the cloud has become a general development. Moving out of the office has obvious cultural implications, as also seen in many other sectors. Scholars have already depicted the cultural transformation of law by the transformation from law offices to law firms.³⁹ The recent trend towards virtual offices is likely to further impact on the culture of practicing law. More concretely, this development risks damaging the shared culture of firms which in most places is achieved through

³⁵ See (Alternative Legal Service Providers: Understanding the Growth and Benefits of These New Legal Providers 2017, p. 4).

³⁶ (Sennett 2006).

³⁷ (Mak 2017) See also, (Amani Smathers 2014).

³⁸ (Granat and Lauritsen 2004).

³⁹ (Dezalay 2007).

collective processes and interactions in common offices. Other sectors have discussed teleworking and telecommuting since the 1970s, and it is interesting that it is only now making it into the practice of law. But, the potential pitfalls of teleworking, notably the breakdown of common office culture, are likely to also apply to law.⁴⁰

Related, but more extreme, is the notion of Virtual Law Offices (VLO) which are law firms delivering legal services exclusively online. VLOs provide a web area for clients that is accessible via a user name and a secure password, incorporating a secure client portal into the architecture of its site. This technology gives law firms an online platform for offering a wide range of services that normally would be offered by telephone, fax, or in-person meetings. An example of VLO is <http://www.illinoisdivorce.com>, a firm specialized in helping parties in ordinary divorce matters. The firm operates in the following way. Clients access the firm's secure client space, where they can complete a questionnaire for a Marital Separation Agreement and a set of divorce pleadings. When the client's information is submitted, the necessary documents are instantly created as a first draft ready for the attorney to review. In practice, a paralegal first reviews the documents and emails the client if there is a need for additional information. By the time the attorney gets the document for review, they are 90% complete and ready to sign off. The whole package is sold for USD 185.00.⁴¹

Similar developments are occurring in the realm of Online Platforms of Lawyers, such as *DirectLaw*,⁴² *NewGalaxy*,⁴³ *LawKick*,⁴⁴ *LegalZoom*,⁴⁵ and *Rocket Lawyers*.⁴⁶ These platforms basically replicate the business model of companies such as Uber and Airbnb. They provide lawyers with online visibility and access to clients that they would not have been able to reach otherwise. Like Uber and Airbnb, they also allow the clients to share their views on the lawyers and their performance. *DirectLaw* is also known for having large inventories of automated legal documents that clients can use with minor adjustments.

In addition, several law firms have adopted Interactive Legal Advisers and Online Legal Advice services. *The Interactive Legal Adviser* allows clients to receive legal answers after having completed online questionnaires.⁴⁷ Similarly, the *Online Legal Advice* is made up by a cohort of lawyers providing legal advice by telephone and email, often for a fixed price per incident.⁴⁸ Among the most known online legal advice services, we find the following three companies: *LawHelp*,⁴⁹ a US online resource that helps low-income people find free legal aid programmes and answer questions about their rights; *LawHelp Interactive*, which helps clients to complete legal documents for free; and *Probate Wizard*, which is an online facility providing users with easy ways of administering an estate in England and Wales. The service was recently sold to six law firms.

Finally, important developments are occurring in the fields of Virtual Courts (VC) and Online Dispute Resolution (ODR). These are on-line platforms that offer tools for solving conflicts almost entirely on the internet.⁵⁰ VCs generally seek to speed up conflict resolution through the use of modern technology in courts, especially video technology. The earliest, and still most common, application of this is when defendants do not attend court in person, but appear via a video link to the court where the magistrates are sitting.⁵¹ In 2010, the English Ministry of Justice conducted a pilot-study,

⁴⁰ For an early account of this phenomenon, see (Pratt 1984).

⁴¹ (Richard 2008).

⁴² <https://www.directlaw.com/> (accessed on 20 December 2018).

⁴³ <http://www.newgalaxy.com/> (accessed on 20 December 2018).

⁴⁴ <https://lawkick.com/> (accessed on 20 December 2018).

⁴⁵ <https://www.legalzoom.com> (accessed on 20 December 2018).

⁴⁶ <https://www.rocketlawyer.com/> (accessed on 20 December 2018).

⁴⁷ (Richard 2008).

⁴⁸ (Susskind 2013).

⁴⁹ <https://www.lawhelp.org/> (accessed on 20 December 2018).

⁵⁰ (Susskind 2013) The European Commission has also endorsed such means of dispute settlement. See <https://ec.europa.eu/consumers/odr/main/?event=main.home.show> (accessed on 20 December 2018).

⁵¹ (Atkinson 2012).

which concluded that a video link between a police station and a court could be successfully used to conduct a first hearing in the majority of cases.⁵² Similarly, the Caribbean Court of Justice, the regional economic court of the Caribbean Common Market, has recently begun to allow the use of video-conferencing (through Skype and Zoom) and e-filing in order to facilitate access to the court for parties that do not reside in Trinidad and Tobago, the place where the court sits.⁵³ We find similar developments in many other courts. Differently from VCs—where a physical courtroom still exists—in ODR, no traditional courtroom is involved and the entire process of solving disputes is conducted on the web.⁵⁴ Examples of this new practice are the following: *Cybersettle*, a web-based system launched in 1998 mostly specialized in personal injuries and/or insurance claims;⁵⁵ the *Online Mediation System*, in which third-party mediation is conducted electronically;⁵⁶ and *Square Trade*, which claims to have solved more than 1 million cases on-line.⁵⁷

The described developments in lawyering on the web and in the cloud are not simply new tools for practicing law and solving disputes. As other technological advances, they also have the potential to trigger changes in the organization of the legal profession and the dynamics of the legal field more generally. It is plain to see that law firms and lawyers are becoming increasingly more dependent on web technologies for being competitive.⁵⁸ Similar to the already described developments caused by outsourcing and alternative legal providers, many of these new tools, not only allow for a more efficient and less costly form of legal practice, but also provide new forms flexibility to the practice of law. Today, many lawyers are already changing their work rhythms and locations, some preferring to work remotely from home rather than from the law firm. If more deeply integrated, this will ultimately result in a change in the law firm business model and associated culture, and possibly its traditional use of imposing office buildings in down-town settings. What is sure is that less office space will be needed. As to smaller law offices and solo practitioners, the new technologies also offer some potential. They may well enhance their productivity and competitiveness as these technologies allow them to speed up their practices and to interact with clients on a host of different platforms and in new and different dimensions.

At the same time, there is little doubt that some of these platforms are costly and, therefore, will create new cleavages between on-line and off-line legal practitioners. Another risk entailed in some of these new technologies is that they potentially devalue legal work. As more lawyers seek shelter in new low-cost on-line legal services, they are likely creating a legal market that is gradually underbidding itself, thus fostering a dynamic that is already taking place because of an increasing over-production of lawyers in many countries. The legal professionals involved with more complex cases are, however, likely to steer free from this; and, among the low-cost online legal services, those able to achieve high ratings might well develop a new healthy line of business. These developments very much resemble the re-structuring of the legal field and the risk of creating a legal underclass envisaged with regard to LPO and ALSP which we analysed above.

Another interesting potential consequence of these developments is their impact on the national differentiation of legal practice. Today, a law degree from a national university is needed to practice law, e.g., in England. Online technology, however, is not geographically attached in the same way and, at least for the simpler tasks, the legal work involved with providing on-line legal services can easily be done from low-cost countries. Similarly, since on-line services work best in delineated legal areas so far, it is possible to train cheaper service providers—new forms of tech paralegals—to oversee the

⁵² (Matthew et al. 2010).

⁵³ (Caserta and Madsen 2016).

⁵⁴ (Susskind 2013).

⁵⁵ See, for instance, (Levin 2008).

⁵⁶ See, for instance, (Young 2000).

⁵⁷ <https://www.squaretrade.com> (accessed on 20 December 2018).

⁵⁸ (Richard 2008).

computer-driven conflict resolution and legal advice. Again, for lawyers currently making a living out of dealing with less complicated legal cases, this will pose serious challenges to their future business.

A final challenge that is harder to depict is the transformative impact of new dispute resolution tech on the ways that the processes of solving conflicts are conducted. While it is plain to see that existing ways of practicing law is being influenced by the outlined developments, it is more difficult to gauge how the very process of law itself is being impacted. In other words, as computerised models are increasingly making inroads, they are likely to transform not only the participants in the processes, but also the processes themselves. The conventional model of conflict resolution involving a judge and lawyers' representing the rights and interests of the parties does not seem to align particularly well with a computerised model of conflict resolution. This links to our final section, namely, the interface of human and artificial intelligence in law and its implications.

2.3. *Lawyers versus Machines: Will Artificial Lawyers Outperform Humans Lawyers?*

While most of the tools and innovations we have analysed so far are already making inroads into existing modes of practicing law and are likely to further integrate into legal practice in the near future, the most challenging question inevitably concerns what effects the fields of robotics, machine learning, and AI will have on law. These technologies undoubtedly have the most disruptive potential, but they have not yet entered the mainstream legal market. This may also be because the technology upon which these systems presently rely on is, in many cases, still rudimentary.⁵⁹ Nevertheless, these technologies speak to the core of the practice of law in the digital age, namely the processing and interpretation of large amounts of data. A leading expert in the field, Marc Lauritsen, distinguishes between three kinds of disruptive tools in the field of law and technology, which are helpful for unpacking these new areas of technology: (I) technologies that store and distribute knowledge; (II) technologies that extend the human mind; and (III) technologies that perform autonomous work.⁶⁰

As to the tools that support lawyers in storing and distributing knowledge, *Document Information Systems* and *Work Flow Management Systems* are central. These databases either locate documents within an organization (the former) or support processes within an organization or administers deadlines (the latter).⁶¹ These tools are very useful for lawyers as the data they contain can be easily retrieved in various ways by either browsing through the data or by formulating queries. For instance, *CaseShare*⁶² and *LextraNet*⁶³ offer online repositories of pleadings, decisions, exhibits, transcripts, and other materials in pending cases. *Hummingbird*, *iManage*, and *Worldox* are similar programmes that are already used by many law offices. These tools are essentially systems for storing and distributing knowledge, but they do not, for the most part, use artificial intelligence in significant new ways. They are, so to speak, low-tech AI.

For what concern tools that more specifically seek to extend the capacities of the human brain, it is worth mentioning *Intelligent Legal Searches*. These are systems capable of reviewing and categorizing large bodies of documents, thereby allowing lawyers to retrieve information in the blink of an eye. This technology has implications for legal practice as it is claimed to clearly outperform paralegals and junior lawyers.⁶⁴ For instance, the online platform *Justis* offers legal analytical services, such as identifying leading authorities, discover relationships between cases, search between more than a hundred legal databases, explore and categorize precedents and citations, just to name a few.⁶⁵ By drawing on large extensive online databases of judicial decisions, this technology helps lawyers to

⁵⁹ For this reason, several practicing lawyers and scholars warn against an uncritical application of these technologies to the legal field. Among others, see (Duffy 2016).

⁶⁰ (Lauritsen 2006, p. 166).

⁶¹ (Lodder and Oskamp 2006, p. 5).

⁶² www.caseshare.com (accessed on 20 December 2018).

⁶³ www.lextranet.com (accessed on 20 December 2018).

⁶⁴ (Susskind 2013).

⁶⁵ <https://www.justis.com> (accessed on 20 December 2018).

make informed judgements about risks, costs, and litigation strategies in their cases. Likewise, these tools allow for identifying judges'—or, in some civil law systems, chambers and sections—previous decisions in related cases, thus helping lawyers in drafting the most effective argumentative line for the case at hand.⁶⁶

In international law, the research centre iCourts (Centre of Excellence for International Courts) at the University of Copenhagen has also created systems which offer similar services.⁶⁷ Relying on a large database of decisions of international courts, iCourts has so far provided data-driven legal briefs in cases before the Danish Supreme Court. The centre uses a set of network measurements to identify as precisely as possible the cases relied on by international courts, and the individual value of cases vis-à-vis other relevant cases to a given legal question. As in the case of Justis, the iCourts system seeks to enhance the capacity of lawyers with regard to both retrieving information and to analyse the legal implications of legal information.

The third category—the one comprised of tools capable of working autonomously—is of particular interest for assessing how new technologies may significantly change the practice of law; that is, whether new digital technologies might, in the long run, replace lawyers (or some groups of lawyers) with machines, computers, and/or legal robots.⁶⁸ Already today, AI can perform various functions usually reserved to human agents, such as problem solving, modelling, communicating with other human beings or machines, understanding and filling blanks, controlling robots and similar tools.⁶⁹ Many of these functions can be also applicable to the legal world.⁷⁰

A pioneering system in this regard is undoubtedly *IBM's Watson*, a system able to answer (legal and other) questions in a somewhat superficial way. Watson had its first moment of fame in 2011, when it beat the best Jeopardy player of all times on TV.⁷¹ While IBM has already used this underlying computer programme to aid with medical diagnoses, it recently turned its attention to law and legal processes and started training Watson to search for evidence in data and predict how to win legal cases.⁷² It has been predicted that such technology is likely to significantly change legal practice by displacing many tasks lawyers perform today. At the present stage, however, Watson is only able to perform functions that do not require independent legal reasoning and persuasion, which are central to legal practice.⁷³ According to IBM General Counsel Robert C. Weber, Watson (also known as Deep QA) can be applied to law, but with some caveats. In his own words:

Pose a question and, in milliseconds, Deep QA can analyze hundreds of millions of pages of content and mine them for facts and conclusions [. . .] Deep QA won't ever replace attorneys; after all, the essence of good lawyering is mature and sound reasoning [. . .] But the technology can unquestionably extend our capabilities and help us perform better [. . .] But already it's becoming clear that this technology will be useful in a couple of ways: for gathering facts and identifying ideas when building legal arguments. The technology might even come in handy, near real-time, in the courtroom. If a witness says something that doesn't seem credible, you can have an associate check it for accuracy on the spot.⁷⁴

The problem with Watson is that it cannot provide informed explanations of why the answers provided to specific cases in fact are the right ones. This process requires one to reason with rules and concepts, and Watson is not capable of performing this, at least for now. However, once (or

⁶⁶ On this point, see (Gerami 2017).

⁶⁷ <https://jura.ku.dk/icourts> (accessed on 20 December 2018).

⁶⁸ On this issue, see (Remus and Levy 2017; Rostain 2017).

⁶⁹ (Lodder and Oskamp 2006: pp. 9–11).

⁷⁰ (Surden 2014).

⁷¹ See (Markoff 2011).

⁷² (McGinnis and Pearce 2014).

⁷³ (Ashley 2017).

⁷⁴ (Weber 2011).

if) the programme will enhance its cognitive dimensions, it will likely challenge human agents in activities related to discovery, legal search, creation of forms and briefs, as well as memos and basic legal predictive analytics.⁷⁵

Similar technology has been developed in the field of *Case-Based Reasoning*, which are computerized legal assistants capable of aiding lawyers not only to find relevant precedents, but also to apply them in solving legal problems.⁷⁶ Transforming the process of legal inference from a purely human activity into an automated process remains the central issue and challenge in this field. The hope is that computer programmes will soon assist humans in a substantive way in drawing comparisons and making legal inferences from cases and texts.⁷⁷ While many of these attempts have either failed or have been only partially satisfying, law firms and large business have begun to pay attention to these developments.

Recently, the large insurance company Allianz has chosen the French AI company *Predictice*⁷⁸ as support for litigation analysis and case prediction.⁷⁹ This company operates a natural language processing software trained via machine learning that allows it to read French cases and to reconstruct patterns relevant to the clients. France seems to be at the vanguard in this, as a recent project, *la loi pour une République numérique*, has made thousands of judicial decisions from lower courts available digitally, which facilitate the introduction of tools such as the ones offered by *Predictice*.⁸⁰ Other countries, for example Denmark, have passed laws that require that new legislation is prepared for tomorrow's digital society. In practical terms that implies that new legislation has to be drafted in such a way that it in the long run is easier to put on a formula that can be used in software. In other words, the ambition is to draft "algorithm friendly" legislation that uses binary logic of computers rather hugely complex legal models of main rules with many exceptions. This is however yet to be rolled out.

Moreover, the start-up *Intraspexion* has invented a patented "deep learning" technology that enables corporations to avoid litigation or reduce its costs. *Intraspexion's* technology basically identifies risks before they explode into a full-blown case.⁸¹ The start-up *Blue J Legal*, guided by the Canadian tax law professor Benjamin Alaire, uses machine learning technologies and sophisticated algorithms to predict how courts are likely to rule on new tax cases. Alaire is now cooperating with IBM in order to develop new applications for Watson. In particular, Alaire has been training the supercomputer's Tax Foresight, which currently can produce results that are deemed 90% accurate.⁸² Other somewhat similar tools are provided by companies such as *Attenex Patterns*, *Valora*, *Dolphin Search*, which are programmes able to classify and characterize documents during discovery.

These are only scattered examples of what, in the last few years, has become a booming field of legaltech. In our view, it is too early to fully assess the broader ramifications of these innovations. Yet, these developments have not limited other observers from already speculating about a looming paradigmatic shift triggered by these innovations. One of them, IT law consultant Richard Susskind, notes: "My guess is—and I say this with some hesitation because it could easily be stripped from context by critics—that entire bodies of law and regulation will then be embedded in chips and networks that themselves will be implanted in our working practices or, eventually even, in or remotely accessible to our brains".⁸³ If such scenarios are to become real, it will obviously have far-reaching consequences for the legal profession. Not only is the idea of legal practice as a professional monopoly

⁷⁵ (McGinnis and Pearce 2014: pp. 3046 & ss.).

⁷⁶ (Ashley 2006).

⁷⁷ (Ashley 2006, p. 24).

⁷⁸ <https://predictice.com/> (accessed on 20 December 2018).

⁷⁹ See (Artificial-Lawyer 2018).

⁸⁰ <https://www.economie.gouv.fr/republique-numerique> (accessed on 20 December 2018).

⁸¹ <http://www.intraspexion.com> (accessed on 20 December 2018).

⁸² (Sorensen 2017).

⁸³ (Susskind 2013, p.160).

severely challenged, but also the very notion of legal professionals as new non-human alternative providers are entering the market.

This remains, however, highly speculative as the present-day technology is not yet outperforming humans. But, what is a highly likely outcome of the increased role played by AI in the legal service industry is intensified horizontal competition for legal work. Like in the case of other new technologically-driven competition analysed in the previous sections, lawyers engaged in more routinized work are likely to be the first to face competition of AI and legal robotics. Journeymen lawyers and paralegals, typically performing the more repetitive tasks, such as routine wills, standard contracts, and document review, are likely the first to face non-human challengers. In 2017, a study from Deloitte predicted that, in the U.K. alone, more than 100,000 lower rung legal jobs—some 39% of the sector—are likely to be replaced by automated systems over the next two decades.⁸⁴

While AI offers competition to some, others parts of the profession are likely to gain from these innovations in legal work. Among the top-tier law firms, it is likely that new technologies will increase their potential market share, as they can reach far more clients with a smaller work force. The essential service they provide in terms of advice and argumentation on behalf of clients based on high-level legal understanding is not easily replaced. This goes particularly for their services at the transactional level, but is likely to have similar effects on litigation. Tech-savvy lawyers ready to adapt to the opening of new or specialised legal markets by technological changes might also find lucrative niches by focusing on low-level disputes which can be solved cheaper and more easily via legal tech.⁸⁵ The aforementioned Deloitte report seems to support such preliminary conclusions. The report suggests that while the legal sector is losing some 100,000 jobs, it is at the same time likely to create new jobs to administer and manage new legal technologies. Deloitte predicts precisely the creation of jobs over the next decades related to the mentioned roles. What all of this suggests is, therefore, that the successful lawyers of tomorrow are both adaptable to new technologies and able to seize the opportunities created by new technologies. The development of such skills obviously starts at the law faculties and law schools. While we see growing interest in these developments among law deans, the curriculum remains largely static in most places. There is little doubt that the deeper effect of all these innovations in terms of the impact of digital capitalism on law is not there yet, but it seems increasingly relevant to start preparing for its effects, also at the educational level.

3. Conclusions

What is commonly referred to as the digital transformation of law and society is, as this article has shown, in practice a complex set of processes of translating new technologies into useful business models, on-line platforms, software, and legally-relevant algorithms. It is by no means a one-dimensional or one-directional development, but rather a complex set of innovations and processes that in common have an increased reliance on software, big data, AI, and more generally digitalization. As this article has shown, the developments prompted by these new technologies will likely have both positive and negative effects on law and the legal profession. On the positive side, they might help increase access to legal services for individuals who presently cannot afford such services. One can already see traces of an Uber/Airbnb-like model for legal services or online platforms where users can have their legal problems solved by a piece of software. This will dramatically decrease the price of legal services. In the near future, such platforms might even be considered, at least in advanced welfare states, as simply public services that are offered free of charge by the state via a central computer system. More generally, automatizing the production of (basic) legal products (i.e., the drafting of standard contracts and other similar documents), together with the development of

⁸⁴ <https://www.legaltechnology.com/latest-news/deloitte-insight-100000-legal-roles-to-be-automated/> (accessed on 20 December 2018).

⁸⁵ On this, see the convincing analysis of (McGinnis and Pearce 2014).

online platforms of legal information and dispute resolution, is likely to foster efficiency, cost-reduction, and even greater transparency in the process of law. These same developments are already influencing the organizational structure of the legal field, both with regard to its internal competition and its relationship with other fields and across the public/private divide. Perhaps the most striking effects of these changes are increased horizontal outsourcing of legal work, loss of “ownership” of the modes of production of law by the introduction of tech-savvy non-legal or semi-legal actors, the proletarianisation and commodification of some parts of legal work, as well as a possible and partial replacement of individuals (i.e., lawyers and judges) with machines and AI. The latter is, however, rather speculative at the moment.

These findings clearly suggest that, as concerns law firms, the rise of digital society is accelerating the marketization of legal practice. By the increased horizontal competition and the entrance of new semi-legal actors, the digital revolution is boosting processes towards the commodification of legal work. This is of course not a new development, or a development distinctly linked to digital innovations.⁸⁶ Nevertheless, the current transformation differs from the previous ones, as it is more likely to break down professional monopolies and enable non-legal competitors a new role. Compared to previous transformations, for example, the global spread of the model of the large law firm in conjunction with new a new free market ideology in the 1980s, the current changes simply appear more pervasive.⁸⁷ The digital revolution is not simply offering new business models; it is challenging the broader dynamics of the legal field. In this regard, it is important to keep in mind how the monopoly of legal practice is historically linked to the formation of the state. Traditionally, lawyers have not only represented clients in private disputes, but have played a central role in building and legitimizing the liberal state by brokering power through their multiple roles in national fields.⁸⁸ A seminal study by Kantorowicz showed how lawyers played a key role in moderating the authoritarianism of power holders, thus contributing not only to their own legitimization but also, and above all, to that of liberal state.⁸⁹ The entrance into the legal field of new actors such as tech companies and consulting firms and the associated capitalist logics of expanding markets and profits will inevitably alter the social and political concerns of law. New professional and business interests will gradually incorporate into the logic of the field with resulting new political preferences and social interests.

This changing of the logic of the field is not negative per se. Competition is not in itself an ill, and might well help “update” social fields such as the legal field to better reflect new societal dynamics. There is no doubt that the legal field is robust and can withstand the arrival of competing logic to a large extent.⁹⁰ Where these changes nevertheless pose a risk to the legal field is if the new technologies and its operators ignore or reject the key concerns of law—and its basic source of legitimacy—in terms of the rule of law, legality, and individual rights in a liberal society. While lawyers historically have played “the double role of statespersons-guardians of the public interest and defenders (or agents) of the particular interests of groups or individuals,”⁹¹ the increased competition and marketization of legal practice might turn private practitioners into more one-dimensional businessmen of law mainly concerned with securing or expanding their markets. This suggests that there is a need for public regulation of the new marketplace of digital law if the core of law is not to be gradually lost in the transformation towards digital society. In other words, there is a need for carefully considering how law, not only as a private enterprise, but also as a public good, can be safeguarded in this multitude of processes of change.

⁸⁶ (Dezalay and Garth 2004; Madsen 2008).

⁸⁷ (Dezalay and Garth 2011).

⁸⁸ (Halliday and Karpik 1998).

⁸⁹ (Kantorowicz 1997) See further in (Madsen 2010).

⁹⁰ An example is the relative resilience of small law firms when facing new competitors. Already in the 1960s were their end predicted, yet they have continued to exist ever since. See, for example, (Ladinsky 1963).

⁹¹ (Dezalay and Garth 2011, p. 54).

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