



MASTER'S THESIS 22/23

LEGAL TECHNOLOGY

The individual implementation of AI and the professional autonomy of lawyers

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'The single biggest failure of leadership is to treat adaptive challenges like technical problems.'

- Heifetz & Linsky (2014)

'Law is about justice and justice is not mathematical.'

- Lawyer F

Preface

This master's thesis can be considered as the culmination of my journey in getting a degree in Business Administration, with the specialisation of Innovation & Entrepreneurship at the Radboud University in Nijmegen. With a double degree background, including a law degree, my academic path has been multidisciplinary, which made it possible to offer a different perspective on innovation, AI, and the legal sector. Obtaining this second degree has given me the privilege of now being able to proudly refer to myself as both a Master of Laws and a Master of Science.

My motivation for undertaking this master's program has originally been rooted in exploring the relationship between innovation in general, but specifically in the legal field. Undoubtedly, it is evident that technology plays an important role in our daily lives and in the business world. I have been fascinated by how advancements in AI technology have increasingly collaborated with legal professionals, shaping and influencing the legal landscape.

I would like to take this opportunity to express my sincere gratitude to my supervisor, Nanne Migchels, for his guidance, support, and valuable insights throughout the process. I would also like to extend my appreciation to Sibel Ozasir Kacar, the second examiner, for her contribution to this thesis.

Furthermore, I would like to also express my appreciation to all of the lawyers who dedicated their time to engage in discussions with me on this subject. Their valuable insights and contributions have enriched my research and made it possible to conduct this study and get interesting results.

Last but not least, I want to thank my parents, siblings, partner and friends for their unconditional motivation and support, which have been crucial in this academic journey.

This thesis represents my motivation to explore the relationship between innovation, AI, and the legal sector. I hope it contributes to the existing body of knowledge and leads to further discussions on this interesting subject.

Donika Plana

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Abstract

This research examines the impact of the implementation of artificial intelligence (AI) on the professional autonomy of lawyers. Lawyers pursue a special profession where they have a certain privilege based on power, knowledge and expertise that they acquire in a certain way. This is important in the performance of their work. A professional's work is often characterised by a high degree of expertise, decision-making power and self-control over their work. Since AI can take over more and more tasks and thus influence the profession of a lawyer, this study focuses on answering the question to what extent the implementation of AI influences the professional autonomy of a lawyer. In this research, several lawyers from different areas of law were interviewed that talked about their perception on this important theme. The data show that the question of how AI affects a lawyer's autonomy depends on several factors, such as how optimistic someone is about the technology or how much knowledge someone has about it; how well you can handle the technology; what the current state of development of the AI tool is; the type of lawyer, law firm or jurisdiction. The data show that current developments of legal AI are not yet so advanced. Lawyers view AI mainly from the perspective of support and that it is therefore also only for assistance, for example, to help in the preliminary work of a case. From that perspective, the lawyers answer the questions and indicate that with that in mind, it does not actually have to be such an infringement on a lawyer's professional autonomy. When it comes to the question of what AI could potentially be, the data does show that lawyers prefer AI to remain assistive only, because maintaining control over the work, for example, is an important aspect they want to preserve and they fear that more advanced technology could infringe on this.

Keywords: deep legal technology, artificial intelligence (AI), professional autonomy (PA), lawyers, law firm, individual implementation of technology.

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1. Introduction

Artificial Intelligence (AI) has an undeniable impact on every business sector, influencing various industries and even knowledge-based professions (Gillers, 2011; Pawar & Charak, 2017; Bullows, 2021). This is also the case for the legal sector, more specifically for lawyers (Bullows, 2021; Susskind, 2017). AI is a broad concept, but predominantly refers to the replication of a human mind with a machine or computer to perform tasks that are generally done by human intelligence (Guzman & Lewis, 2020; Tariq et al., 2021). The increasing ability of AI to automate non-routine tasks or knowledge based work is what makes it particularly relevant for professional work (Armour & Sako, 2020; Brynjolfsson & McAfee 2014; Trajtenberg 2019). There seems to be consensus that AI has the possibility to transfer major parts of the work of lawyers to commoditization by taking over or assisting in various legal tasks, such as legal research, reasoning and decision-making (Armour & Sako, 2020; Becerra, 2018; Munisami, 2020). The implementation of AI therefore may require individuals to change their roles, routines, and norms (Klein & Sorra, 1996). Professions that are traditionally defined are often confronted with the challenge of maintaining the balance between adhering to the institutional principles of professional conduct, which prioritize professional-client relationships, autonomy and collegiality and navigating a technical environment emphasizing the importance of technological change (Leicht, 2016).

Professional groups, such as physicians, accountants, engineers, and lawyers have claims to cultural capital, which are historically established through specific forms of training, credentialism and broader institutional structures (McLaughlin & Webster, 1998; Pue & Sugarman, 2003). The legal industry operates as a segment of the service sector and can be specifically characterized by a tight relationship between the lawyer and client (Segal-Horn & Dean, 2007). The profession of lawyers is traditionally defined by power, prestige, exclusive knowledge and autonomy (Garon, 2016; Riordan & Osterman, 2016; Segal-Horn & Dean, 2007). Professional autonomy refers to the freedom to act, decide and practice the profession without interference or external control and in accordance with exclusive knowledge and training (Abott, 1981; Engel, 1970; Mazmanian et al, 2013). Autonomy is seen as crucial for successfully carrying out highly skilled and complex tasks, a propensity to claim monopoly control, and is an important characteristic of being a legal professional (Mazmanian et al., 2013; Pue & Sugarman, 2003; Riordan & Osterman, 2016; Wallace, 1995).

The legal sector faces issues in the implementation of technologies, such as deep legal tech i.e. AI as this sector can be also viewed as a traditionally conservative sector (Fang et al., 2023; Guzman & Lewis, 2020; Michalakopoulou et al., 2021; Susskind, 2017). Nevertheless, the implementation of AI in the legal sector has yet not been studied extensively. The individual implementation of AI requires a close collaboration between the lawyer and the machine (Armour & Sako, 2020; Chinen, 2019). Collaborating with an agentic robot partner, can lead to a decrease in the individuals' perception of their own agency, because AI can possibly take more agency and control in the working processes of a lawyer (Brynjolffson et al., 2018; Ciardo et al., 2020; Gibbs et al., 2021). Evidence suggests that a perceived change or threat to the autonomy of professionals may lead to a resist or failure in the individual implementation of technology (Armour & Sako, 2020; Fang et al., 2023; Gibbs et al., 2021; Rangathan, 2018; McLaughlin & Webster, 1998). In addition, technology can be seen as a factor that can possibly shift the definition and boundaries of the jurisdictional domains and put pressure to the autonomy of professionals (Abbott, 1988; (Armour & Sako, 2020; Fang et al., 2023; Leicht, 2016; Smets et al., 2017).

As AI becomes more powerful, it is important to study the impact AI has on the professional autonomy of lawyers and the influence this in turn has on the individual implementation of AI.

Therefore, the following research question is raised:

'To what extent does the individual implementation of deep legal tech i.e. Artificial Intelligence (AI) in law firms impact the professional autonomy of lawyers?'

The legal sector is currently being challenged by a paradigm shift struggling to deploy AI to its fullest potential and lawyers experience difficulties in engaging with AI (Enholm et al., 2022; Michalakopoulou et al., 2021; Whalen, 2022; Zaefarian et al., 2017). Current studies lack a focus on how AI – that has the possibility to take over more agency – can redefine and shift the traditional boundaries and characteristics of the traditional lawyer (Michalakopoulou et al., 2021; Trimble, 2023). Several scholars therefore suggest that future research should examine how AI can influence the autonomy of higher skilled professionals, i.e. lawyers, because past studies have not been focused on how the professional autonomy of particular occupations can be influenced through technology (Armour & Sako, 2020; Fang et al., 2023; Gibbs et al., 2021; Guzman & Lewis, 2020; Yao, 2020). Furthermore, recent studies are more focused on AI adoption than identifying factors that influence the implementation of AI (Alsheibani et al., 2020; Enholm et al., 2022; Fang et al., 2023). Although some studies have been focused on the implementation of technology in the service sector, the legal sector remains severely under-researched (McAdam, 2005; Michalakopoulou et al., 2021; Segal-Horn & Dean, 2007; Singh et al., 2020). Several scholars suggest that it is important to acquire more empirical evidence about the innovation implementation in service sector, specifically in sectors with higher skilled professionals that possess tacit knowledge, domain specific training and have monopoly control, such as lawyers (Enholm et al., 2022; Fang et al., 2023; Gibbs et al., 2021; Guzman & Lewis, 2020; McLaughlin & Webster, 1998; Michalakopoulou et al., 2021; Segal-Horn & Dean, 2007; Singh, Dhir, et al., 2020). It is therefore important to take into account the characteristics that define a lawyer to study the individual implementation of AI.

Exploration of this understudied relation is therefore crucial to acquire knowledge in how AI can affect the profession of lawyers and particularly the professional autonomy that can be regarded as a defining characteristic of a lawyer. Furthermore, with AI becoming a crucial aspect of the future of many industries and machines and systems becoming increasingly capable, it is also important to take into account the unpredictability of technology (Grimmelikhuijsen & Hoff, 2019; Susskind 2017). This research can lead to more insight in how AI can affect the profession of lawyers. Furthermore, it gives more insight in how lawyers and law firms can ease the transition in the use of AI, leading to the possibility of lawyers and law firms to benefit of the potential advantages of AI, such as being more profitable, gaining competitive advantage and meeting the customers' needs (Bullows, 2021; Enholm et al., 2022; Fountaine et al., 2019; Whalen, 2022).

This thesis will be structured as follows. Chapter two consists of the theoretical framework of this study. Chapter three elaborates on the methodology. Chapter four covers the results, chapter five gives a discussion of the study and chapter six the conclusion.

2. Theoretical framework

2.1. Innovation implementation

The expectation of implementing AI is that it will have a transformational impact on (legal) enterprises. It is therefore important to look into this stage, because the integration of AI into business structures will lead to several difficulties and challenges that companies must overcome (Nortje & Grobbelaar, 2020). The implementation of an innovation can be defined as ‘the process of gaining targeted employees’ appropriate and committed use of an innovation’ (Klein & Sorra, 1996, p. 1055). According to different stage models, such as the model of Rogers (1983) and Amabile (1988), the implementation of an innovation is part of the innovation process. The five-stage model of Rogers (1983) consists of Knowledge, Persuasion, Decision, Implementation, and Confirmation. The implementation refers to the person putting the innovation into use (Rogers, 1983). The model of Amabile (1988) implies the organization innovation as an organizational creativity process that consists of 5 stages: setting the agenda, setting the stage, producing the ideas, testing and implementing the ideas, and outcome assessment.

Implementation presupposes the adoption of the innovation, which can be defined as ‘a decision which is made by senior organizational managers that employees within the organization will use the innovation in their work’ (Klein & Sorra, 1996, p. 1055). The distinction between adoption and implementation is crucial as it is common for individuals, teams, organizations, and communities to adopt innovations but struggle to successfully implement them (Klein & Knight, 2005; Klein & Sorra, 1996). Choi & Moon (2013) argue that the implementation of an innovation creates a new equilibrium that settles the tension of the two systems, which are the users and the innovation that also transform each other. The implementation of an innovation is also considered as the phase between the decision to use it and the actual use (Singh et al., 2020). It thus can be seen as a process of preparing the organization for the use of the innovation, acceptancy by the end-users and continued use by the users (de Melo Heinzen et al., 2019; Damanpour and Schneider, 2006; Singh et al., 2020).

The main focus of innovation research has been on the stages of pre-adoption and adoption and not extensively on the implementation phase as it is labour intensive, leading to rare research on the implementation (Sawang, 2008; Klein & Knight, 2005). The implementation of AI and technology in general is a non-linear process and often treated as a black box in literature (Bartoli & Hermel, 2004; Dewett et al., 2007; Essén, 2009). Despite the fact that studies have identified the need of establishing an infrastructure and allocating resources to support implementation, there is still no complete understanding of the antecedents defining the infrastructure of a successful implementation (Dewett et al., 2007). Service innovation implementation in organizations is also considered as a fuzzy, and phenomenological process that lacks connectedness (Dougherty & Hardy, 1996; McAdam, 2005; Ford, 2000; Singh et al., 2020).

Innovation within the professional service sector means among other things introducing new technological tools (Michalakopoulou et al., 2021). Kleinschmidt et al. (2016) conducted a literature review on the ICT-enabled service innovation in Human-Centred Service Systems (HCSSs). HCCs are service systems that primarily focus on human interaction and personal service, for example health care, hospitality, education, and law (Maglio et al, 2015). According to Kleinschmidt et al. (2016) it is important to focus on the integration of individuals, such as the employees of the organization, and the

human interaction in the ICT-enabled service systems. To ensure successful implementation and integration of AI, businesses will need to manage their internal processes accordingly (Nortje & Grobbelaar, 2020). Their study also showed that managing the employees is a crucial aspect in this process, where the compatibility with existing values and practices, skills and expertise, collaboration, perceived usefulness and perceived ease of use are important factors that influence this process. Lawyers have more engagement with their clients and intensive knowledge, which underpins the innovation in legal service sectors (Brandon-Jones et al. 2016; Brinks et al, 2018; Michalakopoulou et al., 2021; Sampson and Froehle 2009).

2.1.1. Determinants of service innovation implementation

A successful implementation of AI is important to take advantage of the mentioned benefits. As previously mentioned the theoretical gap currently relies in the fact that there is little to no research on the implementation of innovations at law firms. In this paragraph I will derive important antecedents of innovation implementation at service sectors. Singh et al. (2020) conducted an extensive systematic literature review and generated a model of determinants of the effectiveness of service innovation implementation, which can be found in figure 1.

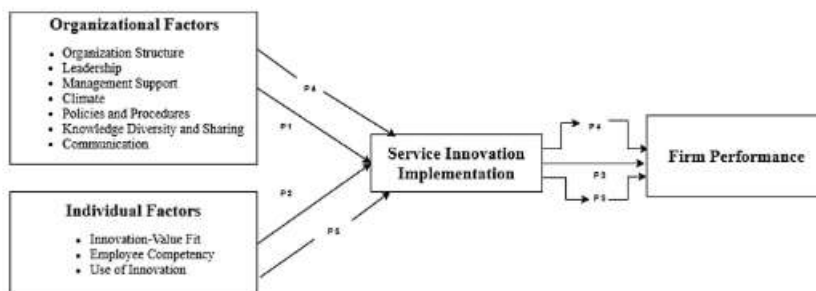


Figure 1. Determinants and consequences of implementation effectiveness (Singh et al., 2020).

This figure shows the future research agenda including propositions, because there is not much empirical evidence (Singh et al., 2020). Singh et al. (2020) state that organizational and individual factors influence the firm's success in service implementation, which has a significant positive impact on the firm performance. By conducting a comprehensive literature review, these authors identified crucial factors that contribute to a successful implementation of innovation in service companies. As previously argued, the implementation implies a tension between the decision that is taken to adopt a new technology and the actual use by the end users into their work. The human element is considered to be crucial in the implementation of new technologies (Nortje & Grobbelaar, 2020; Singh et al., 2020). Christensen et al. (2013) for example state that AI can only be implemented accordingly with human capital interference. As Michalakopoulou et al. (2021) argue it is important to manage the human element, such as the lawyers, in order to implement an innovation. Considering the characteristics and the focus of this research which is on lawyers, this study will mainly focus on the factors that determine the individual implementation of AI.

2.1.2. Individual factors

The important antecedents that determine the innovation implementation at the individual level are the innovation-value fit, employee competency and the use of innovation.

Innovation value-fit. The innovation value-fit is considered to be an important success factor on the individual level according to multiple studies (Dong et al., 2008; Klein & Sorra, 1996; Leiva et al., 2011). This is mostly studied in the context of social influence theory (Dong et al., 2008). The innovation value-fit implies the motivation to use it and the perceived level of benefits. Lawyers across the organization may have varying personal views on the implementation of AI in their work for example. If the perceived level of benefits is high, employees are more positive about the use of the innovation (Singh et al., 2020).

Employee competency. Research shows that skilled and competent employees play a crucial role in successfully implementing service innovation, because they can adapt quicker and better to a change in the process (Singh et al., 2020). Acquiring new technical knowledge and skills is often necessary for many innovations, but this can be a tedious or stressful process for some individuals (Klein & Knight, 2005). The speed at which one becomes competent in using a new technology is related to its complexity (Aiman-Smith and Green, 2002; Klein & Knight, 2005). To successfully implement corporate innovations, proper education and training of employees within the organization is crucial (Singh & Waddell, 2004; Kuratko et al., 2014). According to Ross (2018) it is also important to upgrade the skills of the people to unlock the benefits of AI.

Use of innovation. The behavior of the implementation of employees can be explained by their emotional reactions, determined by the organizational context and the innovation (Singh et al., 2020; Choi et al., 2011). Favourable attitudes and beliefs about an innovation enhance the likelihood of its benefits being established within the organization, since the impact of an innovation depends on users' willingness to use it (Real & Poole, 2005; Singh et al., 2020). The Diffusion of Innovation Theory and the Technology Acceptance Model posit that users' perceptions of an innovation are critical for their intent to use it or adopt a technology at an individual level (Davis, Bagozzi, & Warshaw, 1992; Rogers, 2003; Venkatesh et al., 2003).

2.2. Artificial intelligence in the legal field

Technology in the context of the legal sector is also called legal technology, or in short 'Legal Tech'. The lack of precision in the use of this term makes it hard for researchers to make an in-depth and meaningful discussion about this topic and consider the benefits, disadvantages, design and implementation (Whalen, 2022). According to Whalen (2022, p. 49) Legal Tech can be defined as:

'All devices, capable of being used as a means for interacting with the substance of law or assisting its user to interact with the law, and the skills and techniques by which we use them.'

This study will focus on the subcategory deep legal tech, specifically AI. ML is a subfield of AI that uses statistical and computational techniques to allow computer systems to learn and improve their performance on a particular task based on data (Jordan & Mitchell, 2015; Ahmad et al., 2021). NLP is also a subfield of AI that positions itself within computer science and linguistics that focuses on the development of algorithms and techniques that enable computers to understand, interpret, and generate human language (Jurafsky & Martin, 2020). NLP techniques are used in a variety of applications, including machine translation, sentiment analysis, speech recognition, and chatbots (Jurafsky & Martin, 2020).

Becerra (2018, p. 38) defines AI in the practice of law as 'the theory and development of processes performed by software instead of a legal practitioner, whose outcome is the same as if a legal practitioner

had done the work'. AI has the potential to change the execution of current tasks and create new ones (Armour and Sako, 2020). Some authors argue that lawyers could benefit enormously from the development and use of AI, because the current technological tools that lawyers use are fragmented and rudimentary (Giannakis et al. 2018; Michalakopoulou et al., 2021; Reid & Barnford, 2016; Reid et al., 2018). Riordan & Osterman (2016) state that technology can play a facilitating role in the reorganization of work by standardizing and simplifying tasks, which possibly transforms the way in which human capital is used. Becerra (2018) argues that legal processes have been impacted the most by AI. The work of a legal professional encompasses different tasks that can and cannot (yet) be replaced or assisted by AI (Armour & Sako, 2020). It is therefore important to give insight in the possible role AI has in the execution of (regular) legal activities.

Armour & Sako (2020) conducted a schematic representation of the implementation of AI in a legal process and step-specific requirements in human resources (figure 2).

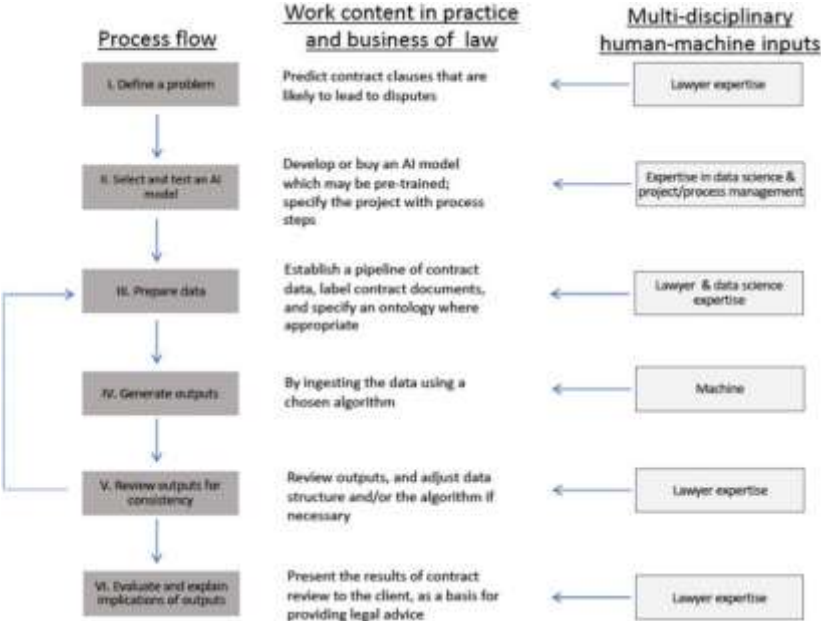


Figure 2. Step-specific requirements in human resources (Armour & Sako, 2020).

Armour & Sako (2020) examined the relation between the capabilities of AI and tasks of a lawyer. This shows that all of the steps – except for step IV where the output is generated – requires human input i.e. lawyer expertise. This reflects a combination of different knowledge requirements, such as data science & project management, information security, design thinking and so on. The first step only requires lawyer expertise to define a legal problem, but the second step where the AI model is being selected and tested requires also expertise in other fields, such as data science and project/process management. According to Armour & Sako (2020) lawyers are only used in keeping oversight and reviewing in step II and III. They argue that lawyers are not used anymore to generate the output, such as carrying out document reviews, because this is automated by the AI tool. Furthermore, they argue that lawyer expertise is still used to review the output and evaluate and explain the implications to clients. Armour & Sako (2020) state that successful AI implementation requires a close collaboration between lawyers and machines.

Greenleaf et al. (2018) state that human lawyers can be outperformed by AI when it comes to retrieving, analysing and processing data. However, according to these authors not all of the AI tools suit all of the

problems. They argue that law is a special domain, because the relationship between legal sources and legal reasoning is unique. AI tools therefore cannot (yet) answer legal questions, because the explanation of why the answer is well-founded is needed and not just the answer.

Becerra (2018) examines the impact of AI on the legal process, legal products and oral advocacy. He argues that the legal process implies a close collaboration between AI and lawyers. When a machine makes a prediction, the lawyer has to analyse the data and inform the client according to the outcome of the machine which strategy they have to choose for their case for example. Furthermore, Becerra (2018) argues that lawyers are assisted in contract analysis, where machines spot legal issues and trends and limitations of liability. Lawyers are needed to determine the validity and accuracy of the decision and prediction of AI (Becerra, 2018). Agrawal et al. (2019) examine AI and its ability of prediction, which is important for the decision-making, in the legal field. They argue that ML can make predictions based on data analysis of which party is liable. In addition, AI tools can use test-facts instead of real case facts to make predictions without direct legal reasoning. Nevertheless, Agrawal et al. (2019) argue that the decision-making and evaluation ultimately lies with the lawyer, who takes into account the inaccuracy and uncertainty of the predictions.

A limitation several scholars notice is the lack of emotional and creative intelligence of AI (Armour & Sako, 2020; Becerra, 2018; Xu & Wang, 2021; Frey & Osborne, 2017). Lawyers in general engage and interact intensively with their clients and use oral advocacy in their work, which makes these characteristics very crucial in the legal process and reasoning. Armour and Sako (2020) for example state that it is not likely that AI can automate the highly tailored and bespoke – novel and inimitable – work of a lawyer and the service they deliver. This implies that ‘creative intelligence’ to solve legal issues for which no test-facts or answers exists, currently are not likely to be taken over by AI (Armour & Sako, 2020; Frey & Osborne 2017; Pettersen 2019; Wooldridge 2020). Xu & Wang (2021) also conducted a study about the capabilities of AI with regard to the replacement of human capabilities. They argue that AI cannot replace the high level interaction between a client and lawyer and the human capabilities of a lawyer, such as ‘intuition, empathy, creativity, psychological warfare, and negotiation’ (Xu & Wang, 2021, p. 880). Nevertheless, several scholars state that for legal work that is ‘exclusively bespoke’ is unlikely to be substituted by AI any time soon (Armour & Sako, 2020 Frey and Osborne 2017; Flood, 2019; Pettersen 2019; Wooldridge 2020).

2.3. Professional autonomy

The perceived sense of autonomy leads to a feeling of personal freedom and self-identity in life (Nicolson & Webb, 2000). This concept can be looked at from multiple dimensions, such as the political and institutional, social and moral dimension (Nicolson & Webb, 2000). The social autonomy indicates that human beings are free from pressures in making their choices. The autonomy from a moral dimension refers to individuals being able to accept or choose according to their own moral values. The personal autonomy refers to the freedom to carry out tasks in accordance with the discretion of the individual (Engel, 1970).

2.3.1. Defining professional autonomy

Within the field of sociology of professions, autonomy is regarded as one of the most fundamental concepts (Carvalho & Santiago, 2015). Professional autonomy is a crucial characteristic that differentiates professionals and other occupations (Jespersen, 2012). Professional work is often characterized by autonomy, which comes from owning a high degree of specialized knowledge that enables individuals

to exercise self-control over their work (Johnson, 1972; Thomas & Hewitt, 2011). Within a professional-client relationship the professional – that also can be considered as an agent – enjoys the autonomy, because of the nature of the professional service of which quality cannot physically be observed (Gray, 1999). This level of autonomy is widely considered to be a defining feature of professional work. The work of a professional often includes high levels of skill, complexity, and uncertainty in its work, which makes autonomy crucial (Mazmanian et al., 2013; Wallace, 1995).

Work-related autonomy for the professional can be defined as ‘the freedom to practice his profession in accordance with his training’ (Engel, 1970, p. 12). The freedom to decide and act is a shared element within the definitions of the concept of autonomy (Supametaporn, 2013). For a professional the work-related autonomy is very important, because this implies that the individual can define his own work goals and think without interference (Engel, 1970). Autonomy within the workplace can be therefore seen as a ‘degree of control over the performing of activities, content, timing and location’ (Mazmanian et al., 2013, p. 1). Within the work of a professional, the autonomy can also be seen ‘as the responsibility to act according the shared standards of the profession’ (Supametaporn, 2013, p. 81). According to multiple studies professional autonomy has many benefits, such as ‘jurisdictional control over tasks, knowledge and performance standards, the freedom to exercise judgment and make decisions with minimal interference, and the authority to define the boundaries of work’ (Abbott, 1981; Engel, 1970; Mazmanian et al., 2013, p. 1). Furthermore, the professional has more control of crucial resources than non-professionals (Walter & Lopez, 2008).

In a literature review of Pursio et al. (2021) two important themes about the professional autonomy of nurses was identified. These are: independence in decision-making and the ability to utilize one’s own competence. Important sub-themes of the independence in decision-making are for example the ability to make independent decisions and being free in the decisions, being responsible for those decisions, having control over the execution of the practice (Pursio et al., 2021). The independence of decision-making is crucial, because it leads to a full utilization of the knowledge and abilities (Budge et al., 2003; Pursio et al., 2021; Smith et al., 2006). The ability to utilize one’s own competence refers to making choices of an approach chosen by the individual itself (Pursio et al., 2021; Varjus et al., 2003). Clients also choose a professional for example with the expectation that the professional lawyers will act and carry out their tasks in line with their knowledge and expertise.

Some professionals, such as lawyers, engineers, physicians and nurses, are granted a specific privilege and power based on their expertise and knowledge which can be considered important in carrying out their work (Garon, 2016; Supametaporn, 2013). Their specific training and education gives the professional exclusive expertise and knowledge, which can be used by the professional to think, act and decide autonomously (Supametaporn, 2013). As Garon (2016) states, intellectualism, obligation, and autonomy defines the legal professional. Therefore, autonomy is very important for a lawyer, which is a highly institutionalized and knowledge-based profession (Garon, 2016; Riordan & Osterman, 2016). The professional thus has the freedom to set their own standards (Supametaporn, 2013). For lawyers this freedom is crucial in order to determine the ends of the legal work activities (Nicolson & Webb, 2000). The autonomy of a lawyer also means that they have control over the relationship with and the service provided to their client (Kritzer, 1999). In combination with their knowledge-based expertise, lawyers have claims of independence that other occupations do not particularly have (Kritzer, 1999).

2.3.2. Professional autonomy and the implementation of technology

As stated before, the implementation of technology – specifically AI – has the possibility to change the way of how a lawyer carries out its legal work. AI can replace the role of an agent and take over decision-making tasks within the legal field (Brynjolfsson et al., 2018; Fang et al., 2023; Gibbs et al., 2021). Gibbs et al. (2020) therefore draw upon the Structuration Theory of Giddens to develop a theoretical framework that helps to explain the interaction between human and machine agency and how they are implicated in a dialectic of control. According to the Structuration Theory of Giddens (1984) structure and agency have a recursive relationship, wherein humans create rules and resources or structures that in turn enable and constrain their actions and behavior. Thus, agents and structures are not independent but rather interdependent and mutually shaped by the duality of structure, as ‘the structural properties of social systems are both medium and outcome of the practices they recursively organize’ (Giddens, 1984, p. 25). This theory is frequently used by conflicts around autonomy and dependence among social actors (for example between employees). Gibbs et al. (2020) therefore make use of this theory, because employees that need to work together with machines may encounter modifications in processes and task restructuring, which could potentially become areas of conflict due to the diminishing balance of control and agency (Brynjolfsson et al., 2018). According to Mazmanian et al. (2013) the tension between autonomy and control particularly occurs in working areas of strong cultures, such as the medical and legal field.

Lawyers obtain their professional autonomy through the attribution of exclusive possession of knowledge by their profession (Campbell, 2010; Kritzer, 1999; Walter & Lopez, 2008). However, the professional autonomy can potentially decrease when non-lawyers can get access to this exclusive, specialized knowledge (Campbell, 2010; Kritzer, 1999). Kritzer (1999) also argues that the autonomy of lawyers is constantly challenged through multidisciplinary professional practices for example. Armour and Sako (2020) also state that lawyers could feel potentially threatened when lawyers have to share the scope of legal services work with non-lawyers, which is normally exclusive to lawyers through the implementation of AI. It is therefore possible that professional power can be shifted away through new forms of technology (McLaughlin & Webster, 1998). McLaughlin & Webster (1998) examined the impact of a new IT system on the knowledge claims and the professional boundaries of physicians. Some physicians felt that their knowledge exclusiveness and their professional status was limited with the implementation of the IT.

Garon (2016) even states that professional autonomy of a legal professional erodes due to the efficiencies of technology. Mazmanian et al. (2013) argue that the autonomy can get limited when the worker responds to a new technological mechanism in the workplace, because they have to acknowledge the trade-off they have to make leading to a loss of discretion, freedom and authority. Benefits that professionals acquire through the professional autonomy facilitate the support of activities that support the autonomy and resist activities that possibly are a threat to the professional autonomy (Walter & Lopez, 2008). A study of Flynn (2002) examined the implementation of a new method in the health care organization, where the practitioners met it with scepticism because of the fear it would erode their professional autonomy (Thomas & Hewitt, 2011). A recent study of Yao (2020) examined the lawyer autonomy and status in the online gig company. This study showed that lawyers face lower intra-professional status and professional autonomy when working online (Yao, 2020). However, this study did not focus on the implementation of AI within the working activities of a lawyer. A study of Walter & Lopez (2008) examined the role of perceived threat to professional autonomy of physicians on the

acceptance of a clinical IT, which is important for its successful implementation in the health care organization. They found that a perceived threat to professional autonomy of physicians has a negative effect on the perceived usefulness of an IT and on the intention to use by physicians.

2.4. Conceptual framework

The implementation of AI can possibly impact, more precisely decrease, the professional autonomy of a lawyer. It follows from the literature review that it has not yet been concretely studied how the individual implementation of AI affects the professional autonomy. While there is no empirical evidence to support his claim, it is an area of concern that needs to be studied. The implementation of any technology requires a close collaboration between the user of the technology and the technology itself. The individual implementation can be considered as a crucial process creating acceptancy and continued use. Lawyers have a particular profession where their professional autonomy is considered as crucial in their occupation. Because of the object that is going to be researched – lawyers – it is important to focus particularly on the individual implementation. The autonomy of lawyers is a crucial aspect of their occupation. Therefore, this study focuses on the influence of the perceived change to professional autonomy on the implementation determinants. Past studies did not focus on this relation. However, considering the special characteristics of lawyers it is important to take this into account, because a decrease in the professional autonomy can possibly lead to a resistance in the implementation of the new technology. Because the legal field is understudied it is important to talk to lawyers to understand to what extent the implementation of AI does affect the professional autonomy. The concept of professional autonomy therefore is put between the individual implementation of AI and the individual characteristics of the individual implementation. It can be expected that a decrease in the professional autonomy will decrease the innovation value-fit and the use of innovation. However, regarding the characteristic ‘employee competency’, the study of Walter & Lopez (2008) suggests that employees who feel competent in engaging with the technology or got trained for the new technology can positively influence the relationship of using the technology. Therefore, this characteristic will be looked into as whether it can positively affect the relationship of a decrease in professional autonomy that impacts the use and innovation value-fit. In addition, since the research question focuses primarily on the impact of individual implementation of AI on professional autonomy, the research will also focus primarily on this. This leads to the conceptual framework shown in figure 3.

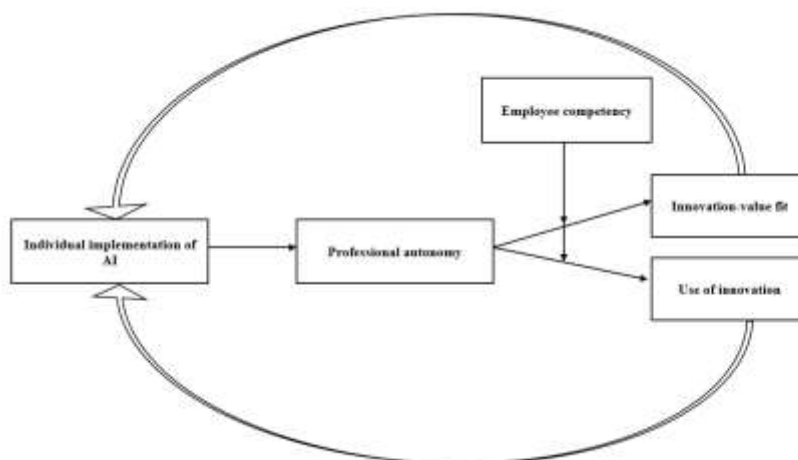


Figure 3. Conceptual framework.

3. Methodology

3.1. Research method

The problem of interest in my research is the implementation of AI in the legal profession and the impact it has on the professional autonomy of lawyers and in turn its effect on the individual implementation. Given the underdeveloped nature of the literature on this topic, I adopt a qualitative research method. This method gives more insight into the nature of the phenomenon and allows me to acquire more knowledge about the phenomena and provoke new thoughts and ideas about this topic (Basias & Pollalis, 2018; Busetto et al., 2020). It will allow me to acquire an in-depth understanding of the phenomenon by exploring the experiences and perspectives of lawyers (making an attempt) to engage with AI tools in their work. Furthermore, this approach is more about building theory and less about testing the theory. This is therefore the right method to adopt, because the literature on the influence of the implementation of AI on the professional autonomy of lawyers is very underdeveloped and not detailed. The literature in chapter 2 gives a representation of the available literature on the individual implementation of innovations in the service sector and the professional autonomy in the medical sector. However, as Singh et al. (2020) state, there is not much of empirical data on the individual implementation of innovations in the service sector. Furthermore, there is no research done about the individual implementation of AI in the legal field and the influence this has on the professional autonomy. Even, the professional autonomy is not researched yet. Since lawyers exercise a special profession because of their culturally embedded character traits (see: chapter 2), it is important to actively talk and engage with lawyers. Also, no research has yet been done on the impact of AI on (the work of) a lawyer. Since examples can be drawn from the medical profession, due to their similarities as discussed earlier, the indicators are used according to the medical profession.

Adopting a quantitative research method is not suitable for this research, because this method is more focused on frequency, generalization and data and does not allow the researcher directly to gain an in-depth understanding and exploration on the nature of the phenomenon (Basias & Pollalis, 2018; Hammarberg et al., 2016). Qualitative research methods, however, are used to study the experiences and beliefs from the perspective of the participant and gaining a deeper multifaceted understanding of the lawyers engaging with AI (Gupta & Awasthy, 2015; Hammarberg et al., 2016). Furthermore, it is important in strengthening the empirical base by gaining insight and exploration in the phenomena (Michalakopoulou et al., 2021; Soltani et al., 2014). For this study in particular, it is important to study the nature of the phenomena and the context in which the lawyers appear. This will allow me to understand the human behavior, beliefs, motivation and the result that led to such behavior of the lawyers (Hennink et al., 2020; Oun & Bach, 2014).

This emphasizes the importance of a qualitative research method, as little to no research has been conducted on lawyers, making it particularly important to have a good understanding of what lawyers' understanding is on this topic. Therefore, this makes this research not entirely inductive in nature. As Thompson (2022) argues that if existing theory or frameworks play a guiding role, the researcher should acknowledge the abductive methodological design. For the researcher reflexivity it is important to be aware of the theoretical underpinning of the research, even when the theory does not fully comprehend the research and thus is not applicable for testing (Thompson, 2022). Abductive research is therefore applicable for this research as it engages with empirical data and the little theory there is (Atkinson et al., 2004; Thompson, 2022). The researcher is therefore not compelled to enter the field with an

completely open mind, as the theory that exists on this subject has set some parameters that prevents findings that are not important nor related to the research question (Thompson, 2022). However, the researcher is not bounded within the theory to complete simplified testing of the theoretical framework, as the researcher does not aim for the objective truth in this study (Hurley et al., 2021; Thompson, 2022). In this study, the many gaps in the theoretical knowledge are explored, which allows the researcher to generate an appropriate and improved understanding that is based on the empirical data (Alvesson & Kärreman, 2007; Thompson, 2022; Timmermans & Tavory, 2012).

3.2. Operationalization

In table 1 the scheme of the operationalization is presented. Here the two important constructs ‘innovation implementation’ and ‘professional autonomy’ are derived into different dimensions and indicators.

Construct	Dimension	Indicators/question	Source
Innovation implementation	Individual factors	Innovation value-fit: e.g. <i>‘To what extent do you see the value of the use of AI tools in your work?’ ‘Are you getting instructed to use it or is it from a personal motivation to use it?’</i>	Singh et.al. (2020)
		Employee competency: e.g. <i>‘To what extent do you have the skills or competencies to use the AI tools?’ ‘Is there any training for these skills?’</i>	
		Use of innovation: e.g. <i>‘To what extent do you use the AI tools for the (core) activities?’</i>	
Professional autonomy	Independence in decision-making	Being free and independent in making decisions <i>‘To what extent do you feel you have enough space to make your own choices when using AI?’</i>	Pursio et al. (2021)
		Being responsible for the decisions <i>‘What about the sense of responsibility when making these choices?’</i>	Pursio et al. (2021)
		Having control over the execution of the activities, content, timing and location <i>‘What about feeling in control of your work when using AI?’</i>	Pursio et al. (2021); Mazmanian et al. (2013)

	Ability to utilize one's own competence	<i>'To what extent does this allow you to retain the freedom to perform your tasks in accordance with what you have learnt at university/continuing education?'</i>	Pursio et al. (2021)
	Define work goals without interference	<i>'How do you balance your own autonomy with control over the AI tool?'</i>	Engel (1970)
	Freedom to practice profession in accordance with education/training	<i>'To what extent does AI still allow you to make decisions based on what you have learned?'</i>	Engel (1970); Supametaporn (2013)
	Knowledge exclusiveness	In relation to the client <i>'To what extent does this make you feel that you still retain control over your relationship with the client?'</i>	Campbell (2010); Kritzer (1999); McLaughlin & Webster (1998); Walter & Lopez (2008)
		In relation to other occupational groups <i>'To what extent do you feel that with AI you are still practising exclusive work as a lawyer?'</i> <i>'To what extent can other occupational groups also perform this work due to the existence of AI?'</i>	Campbell (2010); Kritzer (1999); McLaughlin & Webster (1998); Walter & Lopez (2008)

Table 1. Operationalization scheme.

3.3. Data collection method

The method that is going to be used to collect the data is through in-depth interviews with lawyers working at firms where AI has or can potentially play a role. According to Hammarberg et al. (2016) in-depth interviews are a proper way to understand an experience or event from a personal perspective. This in particular is crucial to gain in-depth understanding from the experiences, beliefs and attitudes from the lawyers in relation to their professional autonomy and the individual implementation of AI in their work. One-on-one interviews allows the researcher to examine the experiences of the lawyers in detail (Hennink et al., 2020). In addition, this method is preferred because other methods such as focus groups do not ensure privacy and confidentiality as one-on-one interviews (Hennink et al., 2020). When talking about personal experiences of the individual implementation of AI and the professional autonomy it is important that the interviewees express their feelings as freely and without filters. This method makes it also possible to gain knowledge about the context of the lawyer and to obtain new insights into their world and the research topic (Qu & Dumay, 2011). The benefit of conducting these

kind of interviews is that they are interactive and allows for unexpected topics to emerge, as argued by Busetto et al. (2020).

To conduct the interviews, a topic list was developed and predetermined questions were set (appendix A). It is ensured that the questions are open-ended and not suggestive to allow the interviewees to express their thoughts and feelings about the topic of interest freely (Busetto et al., 2020). This topic list is derived based on the existing literature. Nevertheless, due to the exploratory nature of this research additional questions were asked during the interview, based on the answers of the interviewees. The interview was therefore basically set up from the dimensions from theory, but because theory in the legal field is very underdeveloped, it was important that the interview and the additional questions were based on the lawyers' understanding.

This is a multiple case study, because the interviews are conducted with nine lawyers from nine different law firms that are – to some extent – utilizing or making an attempt to utilize AI tools in their law firms. The multiple case study in this context analyses nine individuals to compare and contrast the different results of the participants (Yin, 2017). By interviewing lawyers with a different background, I can gain a better understanding of the experiences and feelings they have with AI and its impact on their professional autonomy and how this in turn can affect the individual implementation. The participants are not selected on particular criteria, except that they have to be lawyers working at a law firm engaging to some extent with AI. This allows me to gain a broad understanding of their understanding and explores the relationship extensively.

The table below shows the chart with the nine participants, their function, the company they work for and the area of law in which they work. This shows that they are different types of attorneys working in different areas. A total of two senior attorneys, four junior attorneys and three partners were interviewed. Junior attorneys are lawyers who have not yet completed professional training, in Dutch called the ‘Beroepsopleiding’ (*Nederlandse orde van advocaten, z.d.*). These are attorneys who have already been sworn in by the court, but have yet to complete the professional training, or in other words, they are attorneys on retainer. Senior attorneys are lawyers who have already completed professional training. Partners are senior attorneys who also have a part in ownership.

The lawyers all had the choice of doing the interview online or on location. All lawyers preferred an online interview due to their time constraints.

Furthermore, data was collected through attendance of the researcher at the Lexpo’23 event on June 12nd and June 13rd. This is a prestigious Continental European legal technology and innovation event (*LEXPO, z.d.*). During this event several themes, such as legal operations, legal tech, cybersecurity and the legal workforce were addressed. At this event 38 speakers and panellists with a high level of cultural capital and authority in this field spoke about these themes that touched the themes of this research. The researcher networked with different people on this event and made notes from each presentation. Where relevant, this will also be included in the results. See appendix D for the sources used in this thesis.

	Participant	Function	Company	Area of law
Interview 1	Lawyer A	Senior attorney-at-law	Law firm A	ICT and privacy law
Interview 2	Lawyer B	Junior attorney-at-law	Law firm B	Administrative law
Interview 3	Lawyer C	Partner	Law firm C	Civil law

Interview 4	Lawyer D	Partner	Law firm D	Corporate law
Interview 5	Lawyer E	Junior attorney-at-law	Law firm E	Employment law
Interview 6	Lawyer F	Partner	Law firm F	Corporate law
Interview 7	Lawyer G	Senior attorney-at-law	Law firm G	Real estate law
Interview 8	Lawyer H	Junior attorney-at-law	Law firm H	Real estate law
Interview 9	Lawyer I	Junior attorney-at-law	Law firm I	Corporate law
Short interview 10	Lawyer J	Professional support lawyer	Law firm J	Real Estate

Table 2. Participants' scheme.

3.4. Data analysis method

The nine interviews were all recorded with explicit permission of the interviewees. Afterwards, the interviews have been transcribed through the tool of Microsoft Word Online. As this method is not flawless, the researcher re-listened to all the recorded interviews to check the transcripts for errors and added or modified them where needed. For the analysis the software of Atlas.ti was used to code fragments of the data based on the different indicators from the operationalization scheme. The codebook will be presented in appendix C. However, as this research has an exploratory character, additional codes were added during the coding. Because, as this research has an abductive character the analysis does not solely rely on the observed phenomenon for its explanation (induction), nor considers it as testing an existing general rule (deduction), but it combines both (Vila-Henninger et al., 2022).

The first step of analysing the data was the creation and development of an abductive codebook (Vila-Henninger et al., 2022). This means first coding the data based on the pre-determined indicators following from the operationalization scheme (table 1). This is important, considering the researcher reflexivity (Thompson, 2022). However, as this study has an exploratory character it leaves room for the participants to elaborate on their own perspective and does not hold rigid onto the derived indicators from the theory. After doing the first round of coding with the data from the indicators of the operationalization scheme, the researcher followed up the coding with a second round. This meant re-reading the transcripts a couple of times. In this phase the researcher conducted an open coding and allowed the generation of different codes that is derived from the data and represents the understanding of the participant about a specific topic.

The data analysis method that is used, is the comparative analysis method. This method allows the researcher to compare and contrast the cases within the data to identify similarities, differences and patterns. This means that the researcher has to go back and forward within the cases and across the cases while comparing and contrasting the data (Dierckx de Casterlé et al., 2012). This will lead to an increase in the understanding of the data, while keeping the integrity of the individual cases and simultaneously including the important aspects of other cases (Dierckx de Casterlé et al., 2012). Since it is important to look at the different perspectives of the different lawyers and how they think about the aspects of the topic, this is an appropriate way to analyse the data, as it allows comparing where the similarities and differences are with regard to the outcomes.

As multiple data analysis method ensure the quality, Interpretive Phenomenological Analysis is also used to analyse the data and to obtain the most out of it. This method was used, because this assists in exploring how the participants make sense of their world and understand their way of experiencing phenomenon's (Alase, 2017). As this subject considers the individual implementation and the

importance of characteristics of a lawyer. As this method makes it possible that the participant can express its experience based on its own term rather than based on predetermined sets, this allows the researcher to adhere to the abductive character.

3.5. Quality criteria

In order to analyse the quality of this research, the quality criteria of Guba and Lincoln (1989) were used. These criteria are: credibility, transferability, dependability and confirmability.

Credibility. The credibility refers to the question if the evidence that is provided are an authentic representation of the actual situation and if the insights are reliable and plausible. There have to be a fit between the constructed realities of the respondents and the reconstructions that are attributed to them in order to make the results more reliable and plausible. This is ensured by member checks with the participant and prolonged engagement (Rohleder & Lyons, 2017). The interpretation and understanding of the researcher of a specific topic are tested with the participant during the interview. Furthermore, the duration of the interview is long enough to spend enough time with the interviewee in order to get to a deep level of the understanding of the participant about the phenomenon that is being researched.

Transferability. The transferability refers to the question if the insights can be transferred to other contexts. This criteria is ensured by explaining the results and the research case with enough detail so the reader knows about the circumstances of the case that are examined (Rohleder & Lyons, 2017).

Dependability. The dependability refers to the question if other researchers would come up with the same results. This criteria is ensured by documenting, showing and explaining all of the research steps in detail and by being transparent about the decisions that were made by the researcher.

Confirmability. The confirmability refers to the question if the insights of the results are stemming from the data and if the results are not a product of the own perceptions of the researcher. This criteria is ensured by documenting the research in detail and being aware of the own thoughts of the researcher. Furthermore, this criteria is ensured by showing the research process in detail and by being transparent about the research steps and the reason behind decisions. In addition, this criteria is ensured by audit trails (Rohleder & Lyons, 2017). By describing the data collection, analysis and coding in a detailed and transparent way the researcher provides the reader with an insight in the explicit choices that were made, which gives a transparent representation of the responses of the participant rather than the own preconceptions and biases of the researcher.

3.6. Research ethics

In this section it is important to elaborate on the role of the researcher, the informed consent, confidentiality and anonymity, the avoidance of risk and mistakes.

The role of the researcher is objective and therefore aims to not influence the respondent in participating in the research. There is also no funding (by the participant) or any other benefits in conducting this research. Thus, there are no conflicting objectives between the researcher and the researched phenomenon. Furthermore, the intent of the researcher is not kept anonymous or disclosed and there is no total immersion of the researcher.

With regard to the informed consent, the participants are provided with information of what their participating in the research project implies (Wiles, 2013). This information is given at the invitation of

participating and during the interview itself. The participants are informed about the goal and reason of the research. Furthermore, the participant is informed about the meaning of their involvement, potential risks and benefits, and how issues of confidentiality and anonymity are addressed (Wiles, 2013). In addition, the participants are asked for explicit consent about the recording of the interviews and if the participant and its organization wants to be kept anonymous within the research. The consent is not only referred to the agreement to participation and recording, but also refers to the right to withdraw at any time in the research. Furthermore, the participant is informed about the way of how the interview will be recorded and how the research will be published. The results of the research are also shared afterwards with the participant if desired.

The participants are also informed about how confidentiality and anonymity are guaranteed within the research, which also includes informing the participants about how the data is going to be used, how it will be reported, if they can be recognized and what the implications might be for the participant (Wiles, 2013). The participants are also informed about the fact that the research is being published in the repository of the Radboud University. This also implies that the participants are provided with information about the possible audience of the research. Furthermore, the anonymisation of the participant and the location are being guaranteed if desired and pseudonyms are used when needed (Wiles, 2013).

Lastly, it is important that harm and mistakes are avoided at all costs. This study aims to generate more knowledge of an underexplored phenomenon that will hopefully lead to more insights into science and practice. Therefore, it is at all times not intended to cause harm. Making mistakes will be avoided, but once a mistake is made, the researcher will deal with it with transparency to learn from the mistake and wrap its solution with safeguards. Potential harm or risks are explained to the participants before participating and are part of the consent process (Wiles, 2013). Based on this information the participant can make the choice whether they want to participate or not. However, during this study there were no risks or harm identified.

4. Results

4.1. The individual implementation of AI

The data show that lawyers mainly use AI in a supportive way, such as looking up case law or (re)writing certain texts. The data further reveals that lawyers are constantly looking for methods to perform their work faster, more efficiently and better. Lawyers state for example that they would like to use AI in a form that supports them even more, for example by being able to manage large files better or assist in writing the plea (lawyer A). The data also show that some AI tools are already being used to help lawyers carry out preliminary work more quickly and purposefully. The data also show that the lawyers are currently still in the experimentation phase and that they are mainly testing many tools to see if it can add value to the work. Lawyer D states, for example, that in addition to legal work, they are also looking for new systems that can help lawyers perform the work more efficient and sometimes work on a subscription basis with the available legal AI tools. About the implementation of legal AI, it is also stated that there are still too many bugs at the moment, but that the basics to provide good support are there (lawyer A). However, the data also show that lawyers are currently mostly using general AI tools that are not yet domain-specific. Lawyer F for example states that:

'I do not have much knowledge about existing legal AI tools. The output of the current AI tools remain very general. It gives a general story, but it does not add much to my work. But I think when you allow more databases, it will happen. However, we also used some legal AI tools that correlates pieces of texts which was very promising. We are waiting for more legal AI tools.'

There are also lawyers who argue that they do not yet make very much use of AI, because they want to keep thinking for themselves and fear that it takes away from the core and fun of the work. On the other hand, it is also argued that AI is not yet widely used because the firm is still very conservative or because they do not yet have much knowledge of available AI tools. Lawyer B for example states that the lawyers in the office do not know if there are any tools available that are legal specific and that are used by the entire legal profession for assisting in the core tasks of their work.

4.2. The influence of AI on the professional autonomy of lawyers

4.2.1. The professional autonomy of lawyers

The data show that the professional autonomy of lawyers is a very important aspect in their work and can be even seen as a pull factor of working as a lawyer in a law firm. This is thus particularly the case for attorneys. Lawyer I for example states that he left his previous job, because he was not granted enough independence to make his own choices without asking permission. In this section I will elaborate on the aspects that form the professional autonomy of lawyers. As this study has an exploratory character, the participants were asked what their professional autonomy consists of and how they shape it in practice.

The data show that the rules of conduct specific to lawyers are also important in practice. Some of the lawyers for example base the shaping of their professional autonomy on the principles arising from the code of conduct. Lawyer E example states that the professional autonomy means that you have to be *independent from the client and third parties*, one cannot be *influenced* by third parties, the lawyer has to be *in control* during the whole process and the lawyer has the duty and authority to *determine* their own strategy. Lawyer B also states that professional autonomy means being *responsible*, being

knowledgeable towards the client and other parties or occupations and determining the own strategy. Lawyer G also states that next to being knowledgeable and being responsible for the process and procedural documents (following from the code of conduct), *operating and independent thinking based on competencies* that you gain from legal education also shapes the professional autonomy. According to lawyer F you have to adhere to the code of conduct, so you have to colour within the lines, but within that frame you *decide* what your legal strategy is and you are in charge and free to operate within that frame.

Furthermore, there seems to be consensus that being able to make decisions during the procedure is hugely important in determining the professional autonomy of a lawyer. For example, lawyer D states that the *decision-making power* is in the hands of the lawyer and the lawyer c.q. attorney is the ‘dominus litus’ in the procedure and not the client. Lawyer D also states that you are not the client’s ‘draught horse’ or ‘chain dog’, so being independent from the client and third parties is an important aspect according to this lawyer in shaping the professional autonomy. Lawyer A also shares this opinion, as this lawyer states that it is important to have the freedom of action, despite working for the client. Lawyer H also states that having the freedom to make your *own choices* about who and how you guide and what you do shapes the professional autonomy of a lawyer. There also seems to be consensus about having enough freedom and being independent in the decision-making as lawyer C for example states. Lawyer I also states that having the freedom as a professional to shape your work independently and having the freedom to make choices is part of the professional autonomy of a lawyer. Being responsible for these choices is also very important as lawyer D states. Within the freedom of making choices *adopting your own style* is also a very crucial aspect in the shaping of the professional autonomy, because clients choose their attorney based on the style and way of communication for example.

4.2.2. Retention or increase (in protecting) the professional autonomy

The data show how the lawyers experience the influence of AI on their professional autonomy. In this section I will elaborate on the results about the retention or increase in the feeling of their professional autonomy when working with AI.

1. Operating in accordance with own competencies

Operating in accordance with the competencies of lawyers that they got taught in university or at the professional training is an aspect that can shape the professional autonomy of a lawyer. The data show that some competencies cause a lawyer to be able to stand out and enhance their sense of professional autonomy. In the following, the influence from AI on the professional autonomy of a lawyer will be elaborated.

The lawyers state that there are important competencies and characteristics that current legal AI tools cannot take over. Lawyer A for example, argues that how legal AI is put together now cannot yet take over important competencies of a lawyer, such as being creative, looking into future prospects and the oral and presentation skills at court that belong pre-eminently to a lawyer and the role of trusted advisor. This shows that as a lawyer it remains important to use ones own creative skills in order to have a future perspective and think strategically. Another important competency that shapes the autonomy of a lawyer and cannot be taken over yet by AI is applying the law. For example, lawyer C states that due to the current state of development of the AI tools, lawyer C does not see AI as infringing on the professional autonomy, as for example ‘applying’ is an important task a lawyer has and that is something the tools

are not capable of, according to this lawyer. This shows that the lawyers still see their added value as current legal AI tools do not have certain competencies. Besides the competency of being creative, the data show that the human aspect and being a trusted advisor is also a very important aspect when talking about operating in accordance with one's own competencies. Lawyer D for example states that having empathy in a case is very important and he does not see AI taking this over in the near future which makes him still feel autonomous in his job. Lawyer H also argues that she does not feel intimidated that her autonomy is being breached, because a lawyer has still added value according to this lawyer, because the contact with people and remembering details from previous contact can be of importance. Several lawyers also state that AI does not affect their professional autonomy in this context as lawyers can be seen as trusted advisors next to their role as a legal professional. For example Lawyer D states that besides the legal side or litigation content, being a trusted advisor with expertise and the trust in you as a person is very important. Lawyer A and lawyer H also state that their role of trusted advisor is something that even when working with AI keeps their sense of professional autonomy while performing their working activities.

In conclusion, the data show that the current state of legal AI tools are not capable of taking over important competencies of a lawyer, which leads to no decrease in the professional autonomy of a lawyer. For example, lawyer B argues that the current state of legal AI does not decrease her professional autonomy, because according to this lawyer legal AI is not yet at the stage where it can generate ready-to-use advice. This demonstrates that the current state of development of AI does matter when discussing the concept of professional autonomy. Moreover, the data show that lawyers feel an increase in protecting their professional autonomy when working with AI. Working with AI can free up more time for the core activities of a lawyer that shape the professional autonomy and AI cannot perform, which leads to an increase in the professional autonomy (lawyer C). The data also show that an increase in protecting the professional autonomy can be discovered, because using your own expertise is even more crucial when using AI. Lawyer D for example states that it is important that a lawyer does not become a gagging conduit of what an AI tool tells a lawyer about a case. This is also supported by lawyer B that argues that it is important to stay critical, because based on the rules of conduct you have to show your expertise.

2. Knowledge exclusiveness and being knowledgeable towards other parties/occupations

An aspect of professional autonomy that follows on from the above is the knowledge exclusiveness and being knowledgeable or having enough expertise towards other parties or occupations. Being able to litigate is for example a very important aspect that some of the lawyers have mentioned as being important in shaping their professional autonomy as this is a competence that is exclusive to an attorney as you need an attorney to litigate in court. Some lawyers for example state that something that an attorney can litigate, which is something that lawyers who are not attorneys at a law firm cannot do (lawyer E). The data therefore shows that the individual implementation of AI does not breach the professional autonomy of a lawyer in a direct way as the developed oral aspect and improvising remain important (lawyer F). This would only happen when the civil procedure would rigorously change as lawyer F states:

'And the great thing is that justice is justice is about justice and justice is not a mathematical concept. And that is where AI's zeros and ones go awry.'

3. Knowledge exclusiveness and being knowledgeable towards clients

When discussing the aspect of being knowledgeable towards the client or having knowledge exclusiveness the data show that it depends on the complexity of the case whether the lawyer keeps its professional autonomy in relation to AI. For example lawyer B argues that wealthy clients approach an attorney, because their in-house legal cannot deal with the complex cases and expects the same when legal AI tools become available for others. Furthermore, the data show that the high level of expertise of a lawyer will remain important even when using AI, especially in the current phase as AI is used in a supportive way (lawyer C). Lawyer E compares this with the case that the client states that he already googled the grounds for dismissal for example which is not enough to have a winning case. The data thus show that the lawyer keeps its professional autonomy, because current legal AI tools are only used for support which leads to an individual approaching a lawyer in case of a legal dispute.

4. Being in control during the process

Some lawyers pointed forward whether using AI would be a breach on their feeling of being in control during the process or feeling that someone is interfering. The data show that the lawyer keeps its professional autonomy, because they do not see AI as a supportive tool encroaching the sense of control or determining the way of performing the work activities. Lawyer D for example states that the work of a lawyer without AI also consists of the ideas and thoughts of multiple people and therefore views working with AI similarly. Moreover, the data show that working with AI also seems to increase the feeling of being in control and protect the professional autonomy. Some lawyers state that it is crucial to stay critical and check the output of the AI tool afterwards. Lawyer C for example argues that the element of control increases when using AI, because you do not have to become neglective when using AI, but instead keep a sharp eye on the output which keeps the lawyer in control over what AI produces. The data shows that this increase is therefore precisely due to the use of AI, as it is important to remain in control as a lawyer. Therefore using current AI tools does not encroach the professional autonomy, but leads to an increase as a lawyer it is important to check afterwards to ensure the accuracy of the advice (lawyer G). Lawyer D, for example, argues that it is precisely through the use of AI that a lawyer becomes even more important to continue channelling, selecting and making something coherent out of all the data.

5. Having the freedom to make your own choices

With regard to the aspect of having enough freedom to make your own choices as a lawyer when using AI, the data show that it depends on the state of development of legal AI tools. The data show that the lawyers use AI as a supportive tool and only want to use it as a supportive tool. When asking whether AI would decrease the professional autonomy, lawyer D argues for example that:

'I can't really think of any immediate examples for that. But that's maybe also, because I do feel very clearly that it's just supportive, so ultimately I'm the one who decides.'

This leads to no encroachment on having enough freedom to make choices. Using AI as a supportive tool therefore leaves enough room to decide as a lawyer following the data. According to lawyer B using AI would not decrease the professional autonomy, because she sees it more as a colleague pointing something out and that the lawyer is the one that ultimately decide.

However, this can also be seen from another perspective, which is that working with AI strengthens the protection of personal autonomy and wanting to keep the decision-making power. The data show that lawyers feel that AI has the possibility of being intrusive, which makes it important for the lawyer to keep the decision-making power and not let ones ear – without thinking yourself – hang on what the AI tools produces (lawyer D). Lawyer F also argues that the lawyer is the dominus litus and has the autonomy to think whether the direction the AI sends him to is the direction he wants to go.

6. Responsibility

When discussing the responsibility of the lawyer when using AI, the lawyers argue that the responsibility remains with the lawyer. The data show that the responsibility is an aspect that does not shift to the AI tool, because the lawyer is always personally liable. The relationship between the lawyer and the client is very confidential and you create a direct relationship, which leads to no shift in responsibility (lawyer D). Lawyer F for example states that a machine does not have conscience and no wallet, which means that the lawyer is responsible for the AI tool that he deploys and the output of it. However, the data also show that the responsibility in terms of liability can become tricky when using AI, because when something goes wrong it is debatable who or what is liable (lawyer E). Nevertheless, when talking about responsibility as a lawyer, the data show that when a lawyer makes a choice to use AI, also means taking responsibility for that choice (lawyer H). The data also show that this is related to the expertise a lawyer has and especially from the fact that this is derived from the disciplinary rules. Lawyer G for example states that the lawyer has to be held accountable for the mistakes that are caused by the expertise of a lawyer and especially disciplinary ones even when it is generated by AI.

Moreover, the data show an increase in the (protection of the) professional autonomy, because when using AI there seems to be an increase in the sense of responsibility. Lawyer I argues for example that when using AI choices are made more quickly and the direction is determined which strengthens the sense of responsibility, because you start making more choices and write less.

Furthermore, the data show that specifically for the purpose of ensuring your responsibility, it is important to use AI as a support tool. Lawyer G for example argues that AI has to be used as support to guarantee the expertise and responsibility in the future, because if you just assume that the output is correct, it can diminish the responsibility. This lawyer further states that the use of AI thus increases the feeling and importance of protecting your responsibility by mentioning the case where a lawyer did not check the output of ChatGPT.

4.2.3. Decrease in professional autonomy

1. Operating in accordance with own competencies

The data show that if AI could potentially infringe upon the (core) competencies of a lawyer it would cause a decrease in the professional autonomy of a lawyer. This is the situation when AI could take over the answering of legal questions for example.

In order to retain the core competencies, the data show that AI should be only used as a supportive tool. Lawyer G for example expresses a preference to use AI as a supportive tool by stating that it would be less fun if lawyers would start using AI for the core tasks, because you want to think for yourself. This lawyer argues that using AI for the core competencies would take out the role of the lawyer and therefore the fun of doing this work. The data show that the core competencies are for example writing texts,

doing the legal analysis and drawing conclusions. If AI would be able to deploy these kind of tasks it would decrease the professional autonomy. According to lawyer H it would also decrease her autonomy as a professional if AI would get to the point where the tools start answering legal questions. Lawyer F shares a similar point of view by expressing that it could potentially be a breach on the professional autonomy if ‘AI studied law’:

‘Look, the bugbear is that AI studied law. What do you need humans for then? And if AI is constantly fed with new AI jurisprudence. Then what do you need people for? Yes for shaking hands with clients and writing claims.’

Furthermore, the data show that it is important to ensure your own expertise when using AI by checking the output. Lawyer F for example argues that the temptation comes naturally to rely on the output of AI that he wrote for you on Friday afternoon that you have to hand in on Monday morning. However, it is therefore important to keep relying on your own competencies to ensure the guaranteed expertise according to the data.

The data thus shows that AI could and should take over only basic competencies. Lawyer A for example states that AI can eventually take over all of the basic work and argues the following about a junior attorney:

‘I see AI as really just maybe crudely put, but almost like a kind of junior attorney. All the basic work I think can be done eventually, not now, but then when it is developed through, it can be done by AI.’

However, some lawyers also see a potential threat in this situation, because every lawyer needs a developed set of basic knowledge. Lawyer I for example argues that it could be dangerous for the basic knowledge, because through figuring out the files you gain basic skills and knowledge which are also needed. Lawyer G also states that AI taking over basic competences could be a possible infringement on the development of a junior attorneys’ competences. This lawyer states that doing preliminary research is part of the professional training. He further argues that you have to start low and get acquainted with the practice doing tasks such as case law research.

2. Knowledge exclusiveness and being knowledgeable towards other parties/occupations

The data also shows that a possible encroachment on the professional autonomy depends on the question whether the system of justice can be performed by AI. This is related to the fact that lawyers that are attorneys at law have the exclusive position to litigate. Lawyer F for example argues that the negatives of AI are linked to a possible total change in the system of justice. He states that very few lawyers remain when justice becomes automated on a large scale. However, the data also show that the lawyers do not expect this to happen soon and believe that individuals will still prefer to approach trained lawyers who possess the ability to handle emotions. Lawyer D for example argues that in a legal procedure emotions are an essential part and not a disruptive factor. The data furthermore shows that the lawyers do not expect AI to mimic humanity in different contexts (lawyer E).

In addition, the data show that with AI it is important for lawyers to distinguish themselves. Lawyer C for example states that there is growing competition from the alternative legal service providers who are gaining more prominence from the legislature. This lawyer states that these legal service providers are better at embracing technology and the more efficient they do it the more dangerous it is for the traditional legal profession. Furthermore, lawyer A emphasizes the importance for lawyers to keep their professional autonomy and distinguishing themselves from others by focusing on the core activities of

a lawyer. According to this lawyer this can be done through the role of a trusted advisor for example. This lawyer states that the lawyers that excel in this aspect will ‘make the big money’ in the future, whereas the ones that solely focus on the pure legal work may not enjoy the same level of prosperity.

3. Knowledge exclusiveness and being knowledgeable towards clients

The data show that the professional autonomy of a lawyer decreases if clients perceive AI as the primary solution instead of relying on the expertise of a lawyer. Lawyer D therefore argues that AI should keep its supportive nature, because otherwise the lawyer could refer the customer straight to the local AI computer. Lawyer F states that wealthy clients can someday buy AI to solve their legal issues. When asked whether this would decrease the autonomy this lawyer states that:

‘Of course that is a danger, but look, we also have less and less of farriers, because we ride horses less. They are still there for the people who love horses. This is how the world is evolving. That’s all.’

4. Being in control during the process

The data show that being in control during the process is a very important aspect that shapes the professional autonomy, which therefore preferably should not be affected by AI. The data show that lawyers are used to thinking and working according to a certain way preferring to handle tasks independently. Handling over something where the lawyer does not have direct control on can be scary according to lawyer E for example. Lawyer I also argues that you can lose the feeling of control, because first you are used to dig out the whole file yourself and with AI it is done for you.

Furthermore, the data show that to prevent a decrease in the professional autonomy of a lawyer it is important to use AI as a supportive tool rather than relying on it completely. The data show that it is important to conduct personal analyses rather than only using the AI tool (lawyer E). The autonomy could thus be affected in a negative manner, when a lawyer blindly assumes that certain software could be. Furthermore, the data show that AI should only be used as a supportive tool, because when it becomes something that infringes upon the core tasks and becomes something a lawyer cannot control anymore, it would be something a lawyer would not make use of. Lawyer D for example argues that:

‘I only use it as classical support for my own work. [...] Certainly with AI I think and never say never, but yes, my idea is that that really could and maybe even should be something that supports us and not replaces us.’

When asked about the perspective of lawyer A on exclusively working with AI, this lawyer expressed the openness as long as it served as a supportive role. This emphasizes the importance of AI maintaining its supportive nature and not encroaching too closely on the professional autonomy according to lawyer A. This lawyer indicates that their profession consists of sensitive issues which makes it important to always stay in control and add nuances. The data also show that the lawyers perceive AI currently only as a support mechanism. Lawyer C for example states that he sees AI only as a supportive tool at the moment and argues that when he would lose control over the execution of tasks he would feel a decrease in the professional autonomy.

The feeling of being in control could also decrease when AI would make decisions based on inaccurate information. Lawyer I for example argues that language models like ChatGPT may generate fictional content to realize the requirement of providing an output even when this does not exist in reality, which would be a threat to his professional autonomy in terms of being in control.

5. Having the freedom to make your own choices

The data show that having the freedom to make your own choices is an important aspect that may not be affected with the use of AI. The lawyers argue for example that they would not implement AI in their work if it would make them lose the independence and freedom in making choices. Lawyer E for example argues that if AI restricts her to the extent that she can no longer exercise her own judgement and influence her to a large extent in making her own choices, she would not make use of it.

4.3. Innovation use

The above results already implicitly show the impact of a decrease or increase of the professional autonomy on the use of AI, value-fit and the influence of employee competences. Therefore, this section only highlights some points for clarification.

The data indicate that a perceived decrease on the professional autonomy of a lawyers makes the lawyer reluctant to use the AI tool. This is related to the dimensions the professional autonomy consists of. When a lawyer perceives a threat to the aspects that shape their autonomy, such as the expertise or control over their work it leads to a decrease in the use of the AI tool. For example, lawyer G argues that he would not make use of AI when it would take over the core competencies that also shape his professional autonomy. Lawyer E also argues that she would not make use of AI in her work if she would lose her independence and freedom in making choices. She states that:

'If it restricts me to the extent that I would no longer be able to exercise my own judgement, I think I would not want to participate in it. It should just not affect your independence. I should not be directed by the computer because the computers says, you have an 80% chance that you are not going to pass this procedure, that I should base my judgement on that. Then I am no longer independent, so yes your own expertise also weighs in.'

Furthermore, the data show that the lawyers would not make use of AI if the tool goes beyond its supportive character. The data indicate that AI tools that infringe upon the core activities can lead to a decrease in the professional autonomy which in turn leads to a decrease in the use of the AI tool. Lawyer D for example states that he would only use AI as a supportive tool and when it becomes something that he cannot control anymore, he would not use it. Lawyer H also argues that AI should only be used as a classical supportive tool for work.

4.4. Innovation value-fit

The data indicate that the impact the professional autonomy has on the innovation value-fit depends on several factors. For example, the innovation value-fit depends on the level of technology optimism and knowledge one has. If a lawyer is very optimistic about the technology it leads the implementation of the AI tool leads to an increase in the autonomy which increases the value-fit, because it leads to a better understanding of the perceived level of benefits. This means in concrete that the lawyer that perceives no threat to its autonomy feels more motivated to use the AI tool. Lawyer C for example argues that the motivation to use an AI tool arises when a lawyer sees the advantages of using the AI tool in his or her work without feeling threatened that it can infringe upon the autonomy. As stated, the innovation value-fit increases when the lawyer perceives an increase in the autonomy because he is optimistic about its use. The data for example indicate that lawyers are highly motivated to use AI when it does not infringe upon their autonomy and the tool adds value to their work. Lawyer F for example argues that he expects that AI has the possibility to invent new things and be creative. When asked if that is something that could potentially affect his autonomy, this lawyer states that:

'I expect artificial intelligence to find those new paths easier than I do. I see that as something that is good. [...] I do not see that as a breach on my autonomy, but as an addition.'

Furthermore, an increase in the professional autonomy leads to an increase in the innovation value-fit when the lawyer experiences that by the use of AI he or she can focus on the core activities of a lawyer. For example lawyer I argues that that working with AI frees up more time to focus on the working activities that shape his professional autonomy:

'I think more opportunities actually. I think that as a lawyer you can therefore be more involved in making strategic choices and how you approach it and why you approach it that way, and the human side of it and that you leave it to the tools to help you in the preliminary work.'

Furthermore, the data indicate that the motivation to use AI and the perceived benefits also depend on the state of the development of AI. When AI would advance and would take over more of the tasks of the lawyer or would impact the decision-making power or being in control, lawyers would not see the value of using AI anymore. This means in concrete that the lawyers currently view AI as a supportive tool that can assist the lawyer in preliminary work. Lawyer G for example states that he only sees the value of AI as a supportive tool by arguing that:

'For support I think it is fine to gather information. That can save time, but where we are for not, because then we can be replaced very quickly, so to speak. Which is then only useful for supportive things like case law or short analyses that are not too substantive and go too deep into the case. [...] So it is useful for that, but drawing conclusions and writing texts, I would say let's just do that ourselves and not a computer.'

4.5. Employee competency:

The extent to which a lawyer has the competency to work with AI can also be a determining factor. As Lawyer C for example states that it is important for lawyers to know what happens and how they can make proper use of the AI tool. If they do not know how to use it, it can decrease their PA, because they become a 'puppet' according to this lawyer. Lawyer C further states that gaining the right competencies and training for this is important. Moreover, this is important to do in an early stage, such as during university. Lawyer A also emphasizes the importance of AI competencies as a lawyer:

'I also think that to handle AI well you need to have good skills. I think that category of lawyers is also the category that can eventually master it well to operate the system, so I think in that sense it will be a support and not necessarily a threat.'

Lawyer I also emphasizes the importance to have the right competencies to understand what the computer generates and what it is talking about as this can be a determining factor.

The data show that the employee competency can be a determining factor on multiple places in the relationship. Firstly, the data indicate that an increase in the professional autonomy can lead to an increase in the employee competency, because the lawyer learns how to handle the AI tool and the legal activities in cooperation. When a lawyer does not see the AI tool as a threat, but as a tool that can assist the lawyer he or she gets more motivated to gain more employee competencies. Furthermore, in the following it will be elaborated how employee competencies also can have impact on the relationship of the individual implementation of AI and the direct impact on the professional autonomy of a lawyer.

4.6. Identified factors in the relationship of the implementation of AI and the professional autonomy

The data leads to adjusted models that represents the results, which will be presented in the following sub paragraphs. These are several determining factors that can influence the relationship between the individual implementation of AI and the professional autonomy which lead to several propositions.

4.6.1. State of development of legal AI tools

The data overall indicates that the perception of a (possible) breach on the professional autonomy of a lawyer, depends on whether AI is viewed and or used as a supportive tool or as a more advanced technology. When asking the participants about a possible breach on their professional autonomy it seems that the lawyers look at legal AI currently as a supportive tool that can take over basic working activities, such as preliminary work, doing case law research and so on. For example when asking the question whether lawyer D sees the use of AI as an encroachment on the professional autonomy, he states that he does not see it that way because he sees legal AI currently only as supportive. Lawyer A also shares this point of view by stating that:

‘I do not see AI as an encroachment on my professional autonomy, because I see it as support.’

Furthermore, the data show that the lawyers recognize some flaws and deficiencies in the use of AI and acknowledge that it is not really developed yet. Lawyer D for example stated that he worked with several AI tools, some of which have yielded successful outcomes while others have not. Lawyer A also argues:

‘I recently had a procedure I had to prepare and then I tested the AI system for jurisprudence, but then you notice that there are still too many errors in it, but you do notice that the basis has been laid for tremendous support, so I am pleased with that. It is not yet sufficiently developed.’

This leads to the following model (figure 4).

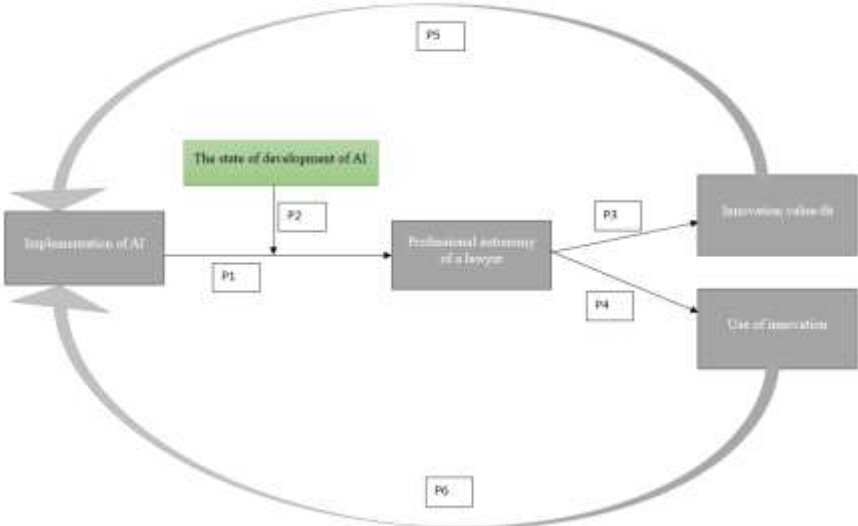


Figure 4. State of development of legal AI tools

This model represents the state of development of AI as a moderator in the relationship between the implementation of AI and the professional autonomy and leads to the following propositions.

P1: the implementation of AI the implementation of AI decreases the professional autonomy of a lawyer.

P2: the relationship between the implementation of AI and the professional autonomy depends on the state of the development of AI meaning that an underdeveloped AI tool maintains or increases the professional autonomy of a lawyer.

P3: an increase in the professional autonomy of a lawyer increases the innovation value-fit.

P4: an increase in the professional autonomy of a lawyer increases the use of innovation.

P5: an increase in the innovation value-fit increases the implementation of AI.

P6: an increase in the use of innovation increases the implementation of AI.

4.6.2. Technology optimism, knowledge & competencies

Another factor that is identified after analysing the data is the degree of how optimistic an individual is about the technology, the knowledge the individual has and the competencies. The data overall indicate that the lawyers are optimistic about using AI and see the value of AI as a supportive tool. In the following, some examples will be shown that illustrate this:

'I think it's gold. I think it's going to make my job more fun and easier. That leaves more time for me to do the serious work? But maybe that's naive thinking now, but I'm just really so very open to that.' (Lawyer A).

'My interest really came out of myself, because I really like optimising, making it better, making it faster, making the process more efficient that you spend less time on things that are not fun.' (Lawyer C)

'To see what new systems are out there that could serve us in the performance of our work and in that context, I also occasionally look between the eyelashes at how developments are with AI In the legal profession, [...] because I think technology can support us well even in our conservative profession and that includes AI.' (Lawyer D)

'I find it very interesting. I think it could be very interesting in the future to facilitate or speed up certain parts of our work after all. I am referring in particular to case law research. That, of course, takes up an awful lot of time, which is actually a waste of time.' (Lawyer E)

'I do have the impression, the certainty that a computer pulls and scans information from sources much faster say the mined much faster than a human ever, say a battery lawyer ever could. I have read in the paper that in medical practice, the advice given by AI on ailments and treatments is often already more complete and better content than what doctors bake from it. And, this is not to the detriment of doctors because they are only human too but I also foresee such an application in the legal profession that people ask an advice to an AI application a legal AI application and you get a good advice. Because why should that be limited to the medical sector.' (Lawyer F)

I really think AI in our work would be an addition. I think it would just reduce the workload (Lawyer H)

'I think it's fine the way we work now, but I think it could support us in the work we do and what we are going to do, and in that sense, of course, we are already supported quite a lot by the secretariat now, but in that sense, we could also be further supported by AI who could, for instance, establish certain facts from voluminous files. Or certain legal basis the basic work on which you now spend a lot of time, for example, could also be done by AI.' (Lawyer I)

Lawyer G states that using AI would take out the fun of the work, because this lawyer sees AI as something that can take over the core competencies of the work of a lawyer. However, as a supportive tool he would be positive as he states that:

'Well, look as support, I would like it, because we all run into it sometimes when you are looking for case law, you just don't find it, because you haven't used a certain term, so to speak.' (Lawyer G)

Moreover, the data indicate that it can also depend on the level of knowledge an individual has about the technology. For example when asking this lawyer about his knowledge of AI, he states that he does not have much knowledge about AI, only the situation where the lawyer used chatGPT in a wrong way. This indicates that this lawyer has a low level of knowledge about AI and is not that optimistic leading to a higher perception of a decrease in the professional autonomy.

The data also show that the question whether the professional autonomy of a lawyer is affected depends on the competencies an individual has. Lawyer C for example argues that it is important to understand how to work with AI and have enough competencies to work properly with AI:

'I think your personal autonomy increases, but it comes at the cost of your autonomy the moment you don't understand what is happening. So I also think the people who are afraid of it who indeed don't understand what is happening either. But you have to use it, I think, as a motive to delve into it. And learn more from it, because if you can use it well, then you keep your autonomy. If the whole world works with AI and you don't understand how to work with it, you become a toy.'

Furthermore, the data indicate that age can be a determining factor whether AI can lead to a decrease on the professional autonomy. For example Lawyer E states that the legal profession consist of very much older people which are reluctant to new technologies. However, the data show that some senior lawyers and partners that are older in age do not necessarily experience a decrease in professional autonomy. For example lawyer F states that he is a lawyer for over 40 years, but he is positive towards technological developments like AI and that he always had been engaged in optimization and automation. This lawyer therefore argues that it does not have to be age-specific, but it is also about the way of working and knowledge about the AI tool. Lawyer I also states that it is not related to age but to the type of person you are asking it and how open that person is to a new technology use in its work. The data also indicates that this is related to a lack of knowledge. Lawyer A for example argues that the older lawyers are open to new technologies, but that they do not have much knowledge about it, which can potentially lead to reluctance to the implementation of new technologies.

The data leads to the following model (figure 5).

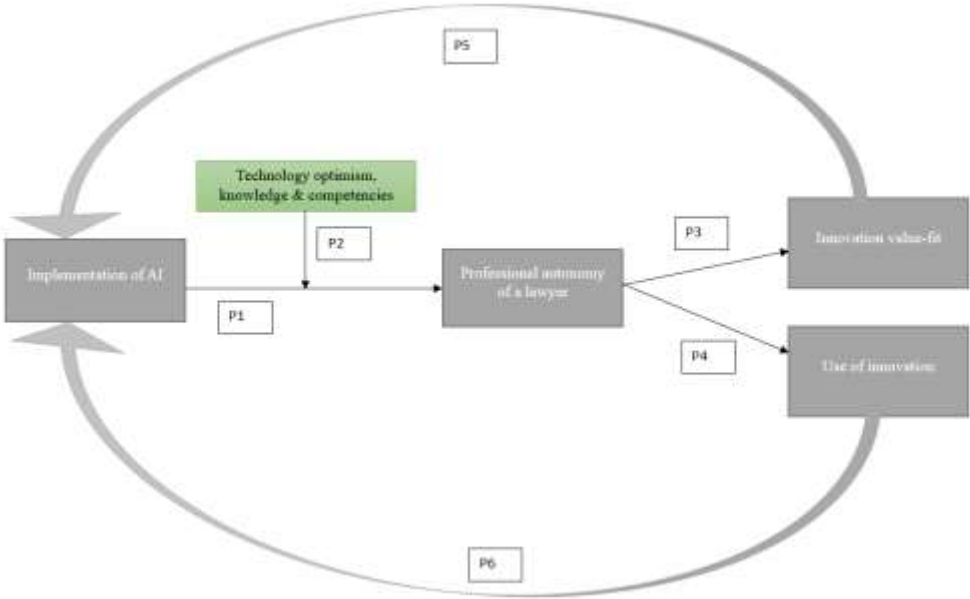


Figure 5. Technology optimism, knowledge & competencies.

This model represents technology optimism, knowledge and competencies as a moderator in the relationship between the implementation of AI and the professional autonomy and leads to the following propositions.

P1: the implementation of AI the implementation of AI decreases the professional autonomy of a lawyer.

P2: the relationship between the implementation of AI and the professional autonomy depends on the technology optimism, knowledge and competencies of an individual meaning that an individual that is an technology optimist or has more competencies perceives a maintenance or increase in the professional autonomy when implementing AI.

P3: an increase in the professional autonomy of a lawyer increases the innovation value-fit.

P4: an increase in the professional autonomy of a lawyer increases the use of innovation.

P5: an increase in the innovation value-fit increases the implementation of AI.

P6: an increase in the use of innovation increases the implementation of AI.

4.6.3. Way of operating (as a lawyer) & area of law

In addition, the data show that it also matters what kind of lawyer it is, what kind of tasks they perform, the type of law firm and the hierarchy within it, and the area of law in which the lawyer operates for the question to what extent it does affect the personal autonomy.

1. Way of operating (as a lawyer)

The data indicate that the question whether the professional autonomy is affected depends on the type of lawyer. This is related to the way of operating as a lawyer. If you are a lawyer that only focuses on the work that is pure legal it is more probable that your autonomy decreases, because AI tools can deploy those kind of tasks. Lawyer A for example argues that junior attorneys that are purely for the execution are not going to achieve the same level of prosperity in the future as the men and women that are able to build their own practice and offer more than pure legal work.

Furthermore, the data indicate that this can also depend on the type of law firm and the tasks that are divided across the lawyers. At mid-sized offices or boutique offices it is more about the person behind the work than the legal work itself. The client chooses the lawyer based on who you are, which means that it is important to distinguish yourself from other lawyers, specifically when working with AI (lawyer A). Lawyer E for example states that junior attorneys at larger law firms have to restrict themselves more to doing only research, which causes a higher decrease in the autonomy. This lawyer states that working at smaller offices requires a lot more independence which leads to a possibility to also claim more autonomy by arguing that:

'I do imagine that if at larger offices junior attorneys have to restrict themselves more to doing more the research, then it really does affect the autonomy more. We are relatively small, so that requires a lot of independence.'

Lawyer C also shares this point of view by stating that AI can have more impact on the autonomy of a junior attorney in a big firm, because they are more kind of a 'workhorse' and the work they do can be taken over more easily. The data thus indicate that it also depends on how the law firm deploys a junior lawyer at work. If you hire a junior lawyer only for the basic working activities it can affect the autonomy of that lawyer more, because these kind of tasks can also be taken over by AI.

In addition, the data indicate that the implementation of AI in the work of a lawyer can change the role of a junior attorney. If a junior attorney is only used as information gatherer to do research, AI can deploy this kind of tasks causing the junior attorney to do ‘real lawyer work’, such as working with clients, going to court and so on (lawyer F).

2. Area of law

The data also show that the area of law can be a determining factor. This is related to the fact that some areas of law are too complex to be fully taken over by AI, leading to no decrease in the autonomy of a lawyer in that specific area. Lawyer B for example indicates that in the area of law in which this lawyer practices, namely administrative law, cannot be taken over by AI because it is very strategic, technical and complicated. This lawyer also makes a comparison with drawing up simple employment contracts which is not that bespoke work at a certain point. Lawyer H also argues that it has less impact on the professional autonomy for certain areas of law, such as areas where there is almost no litigation. Lawyer D also argues that you do not have to be an attorney for contract work for example, but when it comes to procedures this is the exclusive and pre-eminently domain of an attorney. This is also supported by professional support lawyer J's statement that areas of law that are less innovative, such as Real Estate view the use of AI in their work as a possible encroachment on their professional autonomy.

The data leads to the following model (figure 6).

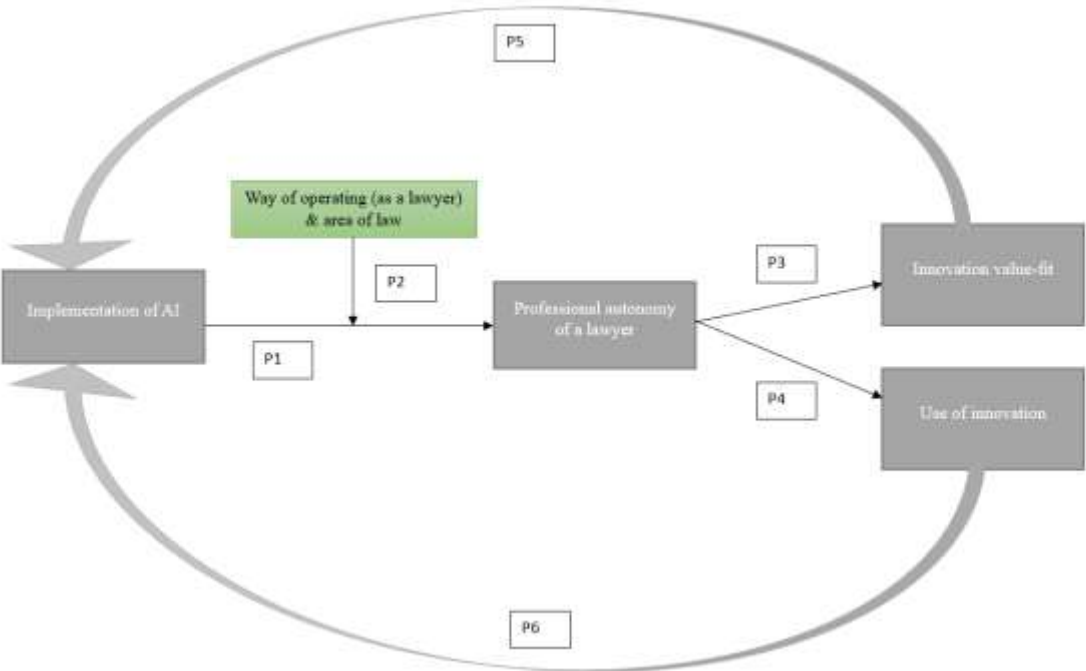


Figure 6. Way of operating & area of law.

This model represents the way of operating and the area of law as a moderator in the relationship between the implementation of AI and the professional autonomy and leads to the following propositions.

P1: the implementation of AI the implementation of AI decreases the professional autonomy of a lawyer.

P2: the relationship between the implementation of AI and the professional autonomy depends on the way of operating or area of law meaning that an individual that focuses on the core competencies of its work perceives a maintenance or increase in the professional autonomy.

P3: an increase in the professional autonomy of a lawyer increases the innovation value-fit.

P4: an increase in the professional autonomy of a lawyer increases the use of innovation.

P5: an increase in the innovation value-fit increases the implementation of AI.

P6: an increase in the use of innovation increases the implementation of AI.

5. Discussion

5.1. Interpretation and theoretical implications

Having shown the results, it is important to highlight the interpretation and the theoretical implications of this study. This study shows that lawyers shape their autonomy in different ways in their daily activities. They derive autonomy, among other things, from the fact that the rules of conduct require them to ensure a high degree of expertise and to be responsible for their decisions, even if this involves working with AI. In addition, lawyers consider it important that despite working with AI, they can continue to perform their core tasks, such as writing opinions, creative thinking, analysing, litigating and ensuring a close interaction with clients. The results show that lawyers see the added value of AI as it is now, as it allows the tool to take over tasks that cost them too much time and does not touch the core of the work of a lawyer, such as case law research.

In the context of the literature, this is an interesting outcome. This research has shown important aspects shaping the professional autonomy of lawyers which immediately demonstrates the first theoretical implication, as this has not been studied before. Furthermore, the literature available on the subject made some little statements about technology and its effect on the autonomy, but this is never researched nor nuanced. For example, Garon (2016) argues with a one-sentence statement that a legal professional's professional autonomy erodes due to the efficiencies of technology. However, this study shows that lawyers actually prefer it when AI is implemented as support, since preliminary work can be enormously time-consuming and they prefer to focus on the core tasks of their work, increasing their autonomy. Brynjolfsson et al. (2018) and Mazmanian et al. (2013) also argue that professionals experience a conflicting position the moment they have to work together with technology, as it forces them to make a trade-off through a loss of discretion, freedom and authority. This research shows that lawyers do not necessarily experience a reduction in their professional autonomy when AI is implemented, but that this is related to several factors, such as the technology optimism, knowledge and competencies of an individual, the state of the development of AI and the way of operating and the area of law. This study has therefore created new models leading to new propositions, as this research shows that the relationship of the impact of AI implementation on lawyers' professional autonomy is related to more factors.

This immediately shows the second and third theoretical implication of this research, as this study has for the first time investigated this relationship in this way, combining little available literature on the subject with the data derived from the interviews with the lawyers. Indeed, the studies that have been conducted, have made small assertions about the autonomy of professionals and technology in particular. However, none of the studies took the aspects of professional autonomy into account and the influence AI has on this. Second, this study explores the elements of autonomy much more extensively, which also makes the nuances of the influence of the implementation of AI on the professional autonomy more visible.

Thus, the results show that AI as a supportive mechanism either preserves autonomy or increases it, as the lawyers feel that it remains important that they continue to control the output of AI to ensure their autonomy. In addition, when implementing AI as a supportive mechanism, the lawyers feel that they can focus on doing more core tasks, because it can take over pre-work and repetitive tasks, saving them time, which leads to an increase in the autonomy. However, the results show that this is mainly due to

the current state of development of legal AI. Because, when AI would take on a less supportive character, the results show that this would lead to a decrease in autonomy. In addition, the data show that lawyers are reluctant to outsource core tasks because, among other things, they do not want to lose decision-making power and maintain control over their work. It appears that lawyers fear they may lose autonomy when AI takes a more sophisticated form. So, in the terms of the model, this means that the moment an AI tool that is implemented is more advanced it results in a decrease in the professional autonomy and more resistance in using it and seeing its value. However, practical evidence (Appendix D, the speakers at the Lexpo event who demonstrated the future developments of legal AI) shows that legal AI is evolving and not only in the area of taking over repetitive tasks. In fact, several large language models are on the way that can also answer legal questions, perform analysis and extract important information based on big data. This research shows that lawyers actually fear this future, because it would take core tasks out of their hands decreasing their autonomy. Thus, based on the model, this means that there will be a decrease in professional autonomy, which means lawyers will be reluctant in the use of AI and seeing its value. Therefore, in my opinion, lawyers should approach this process differently. The situation that AI will become more and more sophisticated and advanced is a given. Therefore, what is important to maintain autonomy is to learn how to properly cooperate with AI as a lawyer. So this requires a different skill set. It is therefore important as a lawyer to realize where you can add value as a person and how you can use AI effectively in your work without losing autonomy. This therefore means that lawyers will not simply be replaced by AI, but lawyers who cannot collaborate with AI do have a greater replacement value, as the legal profession is being redefined by technology.

This demonstrates the fourth important theoretical implication as this study shows that for the implementation of AI among professionals, it is important to look at other aspects. Indeed, when it comes to the individual implementation of technologies, other aspects are also important than those generally formulated such as those of Singh et al. (2020). This research has shown that AI implementation is also about a lawyer's character traits and that a change in autonomy can cause resistance to the use and seeing the value.

5.2. Practical implications

Besides its theoretical contribution, this research also has practical implications. This research considers the individual implementation of AI where it has been shown that a change in professional autonomy has implications for the implementation of AI. Thus, if you, as a manager of a law firm or as a lawyer, want to implement AI, a possible encroachment on professional autonomy should be taken into account. It therefore also follows that it is important to consider implementation at the individual level and the lawyers' character traits. As Heifetz & Linsky (2014) argue, the single biggest failure of leadership is to treat adaptive challenges like technical problems. Adaptive challenges can only be addressed through changes in peoples' priorities, beliefs, habits and loyalties. In concrete terms, this means that it is important to consider in what way, at what times and for what purpose AI should be deployed. This research shows that lawyers perceive AI as a support tool as beneficial, because it could reduce workload. As a result, it could therefore be important, for example, to take stock within the law firm of what people spend the most time on in terms of preliminary work. If a tool for this already exists on the market, it could be a good option to invest in this as a firm, as lawyers do have optimism about this. The study also shows that it is important to train people internally or externally about the use of AI. Specifically, this means that lawyers need to acquire the necessary competencies for this, so that they can better handle AI tools. It is also important to feed the lawyers with the necessary knowledge about

this. Furthermore, it is important to show the lawyers the value-innovation fit by showing what AI is important or necessary for. However, the research does show that the benefits can most likely vary from lawyer to lawyer, from firm to firm and from various areas of law. As a law firm manager or lawyer, it is therefore important to take this into account as well. The research also shows that a decrease in autonomy may occur if AI is more advanced, can take over more core tasks and infringe on decision-making power, the retention of control and especially if it would substantially change the system of justice. The latter, of course, is difficult to foresee for now, as the future of the system of justice is still unknown. But it is already known that AI can possibly take over more decision-making power. As a manager of a law firm or as a lawyer, it is therefore important to think carefully about what the work of a lawyer will look like and how you will shape the work in such a way that you can maintain the aspects that form your autonomy or establish a good collaboration with AI.

5.3. Research limitations

Despite being conducted with many safeguards and care, this research, like any other research, has its limitations. For example, one of the limitations of the research is that most lawyers are fairly positive about (the use of) AI. These lawyers were not deliberately selected on the basis of this criterion, but it does mean that the results therefore also come from a positive perspective on AI. So it would also be interesting to interview even more lawyers who might have a hugely negative view of AI. This would perhaps change the picture. This also immediately shows another limitation and that is that the study could always have been conducted with more participants. However, due to time constraints, this is not feasible and it thus was especially important to draw as much information as possible from the interviewed participants. Therefore, to enhance the nuances of the study, it would also be interesting to select the participants with many more criteria to make an even stronger comparison. In addition, it is important to always be alert to socially accepted answers, as AI is now a hot topic and every firm finds it important to show that they are engaging with it to some extent anyway.

As discussed earlier, there is also little specific literature on the subject, as professional autonomy has been little to not explored at all in the legal sector. In addition, the legal sector is also under-researched. This means that the theory chosen was mainly drawn from other sectors. This does make the comparison interesting, but more theory on the legal sector would make the basis even stronger and immediately lays the bridge to the next sub-paragraph that this area needs further development.

5.4. Suggestions for further research

The legal sector is one that is still vastly under-researched in science. As technology and AI are hugely emerging, it is important to do more research into this profession that has special and distinctive characteristics from other occupations. This research has shown that lawyers answered the questions mainly from the perspective showing that AI is still mainly of a supportive nature. Therefore, a suggestion for further research is to conduct a study at the time when it might get even closer to autonomy to see what the relationship between AI and its implementation and the lawyers is. The study did show that lawyers would experience a decrease in their autonomy at the time when AI takes on a less supportive character. So they do see a danger the moment their autonomy is affected by AI. However, it has not yet been addressed how lawyers would cope with it in the event of this happening. How lawyers would deal with more advanced AI in the future is a good idea for further research. In the same line, the following would also be an interesting study. The results show that lawyers are hugely differentiated by their litigation position. If AI were to cause a change in this regard, this would also

have the necessary impact on lawyers' autonomy and the implementation of AI. A deeper study on this at a later point in time, would also be interesting to see what happens to lawyers.

Furthermore, this study was mostly focused on the individual level of implementation of AI. A study on the organizational level about AI and its implementation would be also a good suggestion for further research. It is also important to study to what extent AI does influence the autonomy of law firms and how a law firm would change on an organizational level.

In addition, another idea for further research might be to conduct a quantitative study to test the model of the results. So that on a larger mass it can be looked at whether it indeed matters what the firm (size) is, the type of firm, the type of lawyer, area of law, how optimistic someone is et cetera. This model can also be tested for other professions and whether there are differences there.

6. Conclusion

This chapter will answer the research question based on the results:

'To what extent does the individual implementation of deep legal tech i.e. Artificial Intelligence (AI) in law firms impact the professional autonomy of lawyers?'

This study focused on interviewing several lawyers who contributed to answering this research question which was not explored before in science. The results show that lawyers' professional autonomy is of great importance in the work of a lawyer. Many lawyers choose this profession for this very reason. For example, one of the lawyers left the previous job, because there was too little autonomy in that profession. In addition, the results show that the lawyers give autonomy a role in their daily tasks in various ways. It can be concluded that lawyers obtain this autonomy mainly based on the lawyers' rules of conduct. These rules result in lawyers having expertise, a high degree of responsibility and the exclusive power of litigation. In addition, lawyers indicate that, among other things, they have great decision-making power and consider it important that they have sufficient freedom in their work and want and need to be able to think and act independently.

In this study, several lawyers from different types of law firms and jurisdictions were interviewed. Regarding the question to what extent the implementation of AI affects lawyers' professional autonomy, the results reveal interesting things. This was explored in terms of the elements of professional autonomy that are important to lawyers in their daily set-up.

The results reveal, first of all, that lawyers currently experience either a retention or an increase (in the protection) of their professional autonomy. First, this follows from the fact that because of the current state of legal AI, lawyers feel that they can still perform their most important or core tasks that shape their autonomy. The lawyers feel that the current AI is not yet advanced enough to take over their core tasks, but that their own trained competencies and expertise are and remain of great importance. They really consider legal AI as a support tool specifically to be able to focus more on core tasks and to have more time available for that purpose. It therefore follows that the use of legal AI as it is now may actually result in an increase in their autonomy. In addition, according to the lawyers, the current AI cannot, for example, infringe on their exclusive litigation position, which still allows them to distinguish themselves from other professions. Furthermore, the results show that even their knowledge exclusivity towards the client is still guaranteed, as current AI has not yet advanced to the point where it can also solve vastly complex cases, so the lawyer still remains important. In addition, the results show that the use of AI makes the retention of control highly important and they also want to continue to protect the retention of control. They do this by building in more checks and balances to make sure that AI's output is actually accurate. This aspect is also discussed from the perspective of AI as a supportive tool. Lawyers also feel that by using AI, they still have enough room to make choices, as they use AI mainly as a supportive tool. There are also lawyers who experience an increase in protecting their autonomy by stating, for example, that AI is only a supportive tool, so if they disagree they also set aside the output, as they are ultimately the decision-makers. In addition, there is also consensus that the responsibility remains with the lawyer at all times, emphasizing the importance even more so when using AI.

The results also show moments when lawyers would experience a decrease in their professional autonomy. The above shows that lawyers perceive AI mainly from the perspective of support. However, the results also indicates that they specifically want to use legal AI only for support. So the moment it

becomes more sophisticated AI that takes over more of the reins, some lawyers set aside its use. In addition, it is argued that using AI can also create the feeling of losing control of the case because you no longer do everything by yourself. The results also further show that it is important that (freedom in) decision-making power should not be compromised. A decrease in autonomy is also noticeable if the lawyer no longer feels that they can perform the work - especially the core activities - based on their competencies. In addition, it is also argued that it may jeopardise basic knowledge, as lawyers argue that basic tasks can be taken over. The results further show that a lawyer's autonomy is lowered if the system of justice and the ability to litigate would be infringed upon. In addition, it may lower autonomy if the client would approach or purchase the tool instead of the lawyer.

The results show that the impact of AI implementation on lawyers' professional autonomy may depend on several factors. First of all, this can be explained based on the current state of development of legal AI tools. In fact, lawyers view legal AI currently only as support, and from the perspective of support, it can be seen that lawyers do not necessarily perceive a decrease of their autonomy. However, the results show that the moment AI becomes less in the nature of support that it can indeed lead to a lowering of their autonomy. This may lead lawyers to reduce their use of AI. In addition, they then see less value from it and thus there is a lowered value-fit. The importance of employee competencies is also shown, as several lawyers indicate that this can help with a better understanding of AI, so it does not necessarily infringe on lawyer autonomy.

Furthermore, the results show that the lawyers interviewed are fairly optimistic about the use of AI (as support). The lawyers for example argue that using AI as support can lead to more space and time for their core tasks. In addition, the results show that the perception of a breach of autonomy can also depend on the available knowledge about the current state of AI and competencies they own. The results thus show that it therefore does not necessarily depend on the lawyer's age either.

Finally, the results show that the extent to which AI affects professional autonomy may also be associated with the type of lawyer, law firm or area of law in which the lawyer practices. According to the results, the lawyer of the future needs to differentiate itself on more than purely legal work. In addition, in a firm where there is less hierarchy, for example, it may mean that the (especially junior) lawyers have to perform less repetitive tasks, so the impact may be smaller. This may also depend on the type of area of law, looking at the innovativeness of this area of law or the type of tasks involved.

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Appendices

Appendix A – topic list for the interviews

Dutch version

Welkom

Bedankt voor uw participatie aan mijn onderzoek. Graag alle antwoorden zo uitgebreid als mogelijk en met ondersteuning van voorbeelden in uw dagelijkse praktijk. Zij eraan herinnerd dat alle antwoorden confidentieel en anoniem worden opgenomen, waardoor zo eerlijk als mogelijke antwoorden worden gewaardeerd.

Introductie

1. Kunt u een korte introductie geven van uzelf (naam, leeftijd, functie en rechtsgebied)?
2. Kunt u me wat meer vertellen over uw rol en werk als advocaat?

Technologie en AI

1. Wat weet u allemaal van kunstmatige intelligentie in de advocatuur?
2. En binnen het kantoor/uw eigen werk?
3. Maakt u gebruik van AI tools en zo ja kunt u voorbeelden noemen?
4. Wat is er nodig om AI tools in uw werk in te zetten?
5. In hoeverre heeft dit invloed op uw werk en taken als advocaat?
6. In hoeverre heeft u het gevoel dat AI uw werk wegneemt?
7. Heeft u een training gehad voor het gebruik van AI en in hoeverre heeft u het gevoel dat u voldoende vaardigheden hebt om er gebruik van te maken?

Professionele autonomie

1. Als u denkt aan het woord professionele autonomie als advocaat, wat betekent dat dan volgens u?
 - a. Hoe geeft u dat vorm in uw dagelijkse praktijk?
2. In hoeverre heeft het gebruik van AI daar invloed op?
3. In hoeverre heeft u het gevoel dat u naast het gebruik van AI nog voldoende ruimte hebt voor het maken van eigen keuzes?
4. Hoe zit het met het gevoel van controle over uw werk bij het gebruik van AI?
5. Hoe maakt u de balans tussen uw eigen autonomie en de controle over de AI tool?
6. Hoe zit het met het verantwoordelijkheidsgevoel bij het maken van deze keuzes?
7. In hoeverre behoudt u hierdoor de vrijheid om uw taken uit te voeren in overeenstemming met hetgeen u hebt geleerd op de universiteit/bijscholingen?
8. In hoeverre kan u door AI nog beslissingen maken op basis van hetgeen u hebt geleerd?
9. In hoeverre heeft u het gevoel dat u als advocaat met AI nog exclusief werk aan het uitvoeren bent?
10. In hoeverre kan een niet-advocaat dit werk ook uitvoeren door het bestaan van juridische AI tools?
11. In hoeverre heeft u hierdoor het gevoel dat u nog controle behoudt over uw relatie met de client?

Individuele implementatie

1. In hoeverre heeft u het gevoel dat u hierdoor anders kijkt naar AI?
 - a. Met betrekking tot de voordelen?
 - b. Met betrekking tot het gebruik ervan?
2. In hoeverre is het belangrijk dat u de vaardigheden hebt hiervoor?

English version

Welcome

Thank you for your participation in my research. Please include all answers as comprehensive as possible and supported by examples in your daily practice. Be reminded that all answers will be recorded confidentially and anonymously, so as honest as possible answers are appreciated.

Introduction

1. Introduce yourself: name, age, position and jurisdiction.
2. Tell me a little about your role as a lawyer; what are your experiences?

Technology and AI

1. What is your perception on artificial intelligence in the legal profession?
2. And within the firm/your own work?
3. What kind of AI tools do you use?
4. To what extent does this affect your work and tasks as a lawyer?
5. To what extent do you feel AI is influencing your work?
6. Have you received training on how to use AI and to what extent do you feel you have sufficient skills to use it?
7. To what extent do you actually make use of the AI tools?

Professional autonomy

1. When you think of the word professional autonomy as a lawyer, what do you think it means (for you)?
2. To what extent does using AI affect that?
3. To what extent do you feel you have enough space to make your own choices when using AI?
4. What about feeling in control of your work when using AI?
5. How do you balance your own autonomy with control over the AI tool?
6. What about the sense of responsibility when making these choices?
7. To what extent does this allow you to retain the freedom to perform your tasks in accordance with what you have learnt at university/continuing education?
8. To what extent does AI still allow you to make decisions based on what you have learned?
9. To what extent do you feel that with AI you are still practising exclusive work as a lawyer?
10. To what extent can a non-lawyer also perform this work due to the existence of AI?
11. To what extent does this make you feel that you still retain control over your relationship with the client?

Individual implementation

1. To what extent do you feel this makes you view AI differently?
2. And with regard to the benefits?
3. And in relation to its use?
4. To what extent is it important to have the skills for this?

Appendix B – interview guideline

Dutch version

Allereerst wil ik u hartelijk bedanken voor uw deelname en het feit dat u tijd vrij heeft gemaakt om hieraan deel te nemen.

In het kader van master Innovation & Entrepreneurship doe ik onderzoek naar legal technology, meer specifiek de implementatie van kunstmatige intelligentie in de advocatuur en de invloed die dat heeft op de professionele autonomie van een advocaat en in hoeverre (een perceptie van) verandering daarin invloed heeft op het implementeren van AI in het werk van een advocaat.

Ik heb voor dit onderzoek een semigestructureerde vragenlijst opgesteld. Dit houdt in dat ik de vragen niet per se in die volgorde zal behandelen. Het gaat er vooral om dat we het gesprek baseren op hetgeen jij uit de vragen opmaakt en daar borduur ik graag op voort.

De antwoorden in dit onderzoek worden confidentieel en anoniem in de thesis verwerkt en worden alleen voor wetenschappelijke doeleinden gebruikt. Dit onderzoek zal uiteindelijk worden gepubliceerd in het archief van de Radboud Universiteit. Indien gewenst, kunnen de resultaten van het onderzoek na afloop aan u worden verstuurd.

Dan zou ik allereerst voor we met het interview aanvangen willen vragen of u het goed vindt dat ik dit interview alleen met audio opneem, zodat ik dit kan transcriberen en gemakkelijker kan hanteren in mijn onderzoek? Hierbij wil ik ook nog aangeven dat u te allen tijde het recht hebt om u terug te trekken uit het onderzoek.

Ik zal allereerst enkele inleidende vragen stellen.

[Vragen: Inleiding]

...

Dan gaan we nu wat dieper in op de vragen.

[Vragen: Technologie en AI]

...

Dan zoomen we nu in op het concept van de professionele autonomie van een advocaat en wat u daar allemaal onder verstaat.

[Vragen: Professionele autonomie]

...

Tot slot vragen of hetgeen we nu hebben besproken invloed heeft op de implementatie. *Indien dit al dan niet impliciet aan de orde is gekomen.

[Vragen: individuele implementatie]

...

Dit waren alle vragen. Heeft u zelf nog vragen? Dan wil ik u nog hartelijk bedanken voor uw deelname en tijd.

English version

First of all, I would like to thank you very much for your participation and making time to participate in this.

Within the framework of master Innovation & Entrepreneurship, I am conducting research on legal technology, more specifically the implementation of artificial intelligence in the legal profession and the impact it has on a lawyer's professional autonomy and to what extent (a perception of) change therein affects the implementation of AI in a lawyer's work.

I created a semi-structured questionnaire for this study. This means that I will not necessarily address the questions in that order. The main point is to base the conversation on what you gather from the questions and I like to build on that.

The answers in this research will be processed confidentially and anonymously in the thesis and will only be used for scientific purposes. This research will eventually be published in the archives of Radboud University. If you wish, the results of the study can be sent to you afterwards.

Then, first of all, before we start the interview, I would like to ask if you agree to me recording this interview with audio only, so that I can transcribe it and handle it more easily in my research? I would also like to mention here that you have the right to withdraw from the study at any time.

I will first ask some introductory questions.

[Questions: Introduction]

...

Then we will now go into a little more detail.

[Questions: Technology and AI]

...

Then we will now zoom in on the concept of a lawyer's professional autonomy and what you all mean by that.

[Questions: professional autonomy]

...

Finally, asking whether what we have now discussed has an impact on implementation. *If this has been discussed implicitly or not.

[Questions: individual implementation]

...

These were all the questions. Do you have any questions of your own? If so, thank you very much for your participation and time.

Appendix C – code book

Code	Exemplary quote	Meaning	Inclusion criteria	Exclusion criteria
Innovation value-fit	<i>'Because I do have the impression, the certainty that a computer pulls and scans information from sources much faster than a human ever, say a battery lawyer ever could.'</i>	The motivation or benefits of the AI tool that is being used.	Perspective on the value and benefits of the use. Motivation for the use.	If they use AI or not.
Employee competency	<i>I also think that to handle AI well, you need to have good skills.</i>	The competencies one has to work with the AI tool.	Having (or seeing the importance of) the competencies for the use of AI.	-
Use of innovation	<i>Yes, we do use them a lot. Look, you notice that the busyness of the day means you don't really use those tools much as an office, but the interest is there, I actually use the office as a kind of sandbox for all kinds of new tools.'</i>	Actually using AI or wanting to use it.	Statements about the actual use AI or wanting to use it.	-
Being free and independent in the decision-making	<i>'But ultimately I am dominus litus also about my own AI and if I don't believe in it in what rolls out, then I won't do it'</i>	When using the AI tool one feels free and independent enough to make decisions without being influenced.	With regard to the decision-making	Statements about having control
Being responsible for the decision	<i>'I think the ultimate responsibility is always with yourself. I mean you are responsible for your client and for your own actions and for your litigation position, so in that respect I don't think your responsibility shifts that much. If you start using AI then it does become trickier.'</i>	When using the AI tool one feels responsible for the decision.	With regard to the responsibility.	Statements about liability
Having control over the execution of the activities, content, timing and location	<i>A human still has to look at it and think about that and apply that, so then your job is more of that reviewing and checking if it's right'</i>	When using the AI tool one feels enough control over the execution of the regular activities as a lawyer.	With regard to being in charge over the execution of the tasks.	Statements about the (final) decision-making

Ability to utilize one's own competence	<i>Because you want to think for yourself and if you enter things into the computer and take out the role and the essence of the advice, yes, that does take the fun out of the work.'</i>	When using the AI tool one feels the ability to utilize the competences that the lawyer got trained.	With regard to the competences of a lawyer	Statements about the value or use.
Knowledge exclusiveness (client)	<i>'That a client actually stops coming to you, but starts engaging such a programme.'</i>	When using the AI tool one has the feeling that he still has the exclusivity in knowledge towards the client.	With regard to the client	Statements about other occupational groups
Knowledge exclusiveness (other occupational groups)	<i>Expertise is already just becoming increasingly important. And, that becomes even more important actually if the simple tasks can be taken over by lawyers that are not associates.'</i>	When using the AI tool one has the feeling that he still has the exclusivity in knowledge towards other parties or occupational groups.	With regard to other occupational groups than associates	Statements about clients
Age	<i>'You notice a big difference between generations of lawyers in how far they see opportunities in that.'</i>	Text that refers to the age in relation to the use of AI or seeing the benefits of them.	With regard to the age of lawyers	-
Current legal AI tools (and its development)	<i>At the moment, though, it is a tool to speed up research.'</i>	The state of the development of the AI tool that is being used or in the future.	With regard to current domain-specific legal AI tools	Statements that are not about the state of the development
Basic work can be taken over	<i>'Or certain legal work, like the basic work that you spend a lot of time on now, for example, could also be done by AI.'</i>	Certain basic activities that can be taken over by AI tools.	With regard to basic legal activities	Core activities.
Knowledge about innovation	<i>'I'm very much into legaltech and I know much about it.'</i>	If the individual has knowledge about AI.	With regard to the previous knowledge about innovation/AI	Statements about the value-fit
Way of operating as a lawyer	<i>'Well, it depends a bit on what kind of practice you have. Most big clients who are big clients who have very complicated issues who will think always still have the need, but I think many</i>	How the individual operates within the firm and what kind of tasks the lawyer deploys and to what extent AI can influence this.	Statements about the tasks the lawyer deploys.	Statements about

	<i>clients who only need standard contracts.'</i>			
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Appendix D – Lexpo sources

Speaker	Function	Subject
Jeroen Plink	Co-founder of Legaltech Hub	‘Practical implications of Generative AI for law firms and in-house legal departments’
Jorn Vanysacker	Co-founder Henschman	‘The rise of the Augmented Lawyer’
Peter Wallqvist	co-founder & CEO of AI company RAVN Systems (now part of iManage)	‘From Notebooks to AI: The Value of Legal Tech’
Isabela Loscher	M and Innovation Chief Regional Officer at PPU	From Frustration to Efficiency: Implementing Legal Tech in a Law Firm
Chris Obdam	CEO of Betty Blocks	‘What leading law firms do different to successfully innovate’
Pim Betist	CEO of docbldr	‘Harnessing the power of large language models in a legal setting’
Alexander Fruehmann	Founding Partner The Legal Minds Group	‘The Leadership Challenge in the Legal Industry: Navigating Constant Disruption’