

'What a feeling!' AI and identity challenges of Patent Attorneys in Australia

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Introduction

Rapid technological and organizational changes have significantly altered the landscape of work in the 21st century. For example, the rise of web-based technologies, such as WebMD and Artificial Intelligence (AI) are transforming the ways in which the specialist knowledge, once the exclusive domain of highly educated professionals, is being delivered. Tasks that were previously considered the domain of professionals - from medical diagnostics to those that are highly repetitive in nature - are increasingly being displaced by digital technologies and complex AI systems (Susskind and Susskind, 2015). These rapid and irreversible changes raise crucial questions about, how AI transforms professional work and how professionals cope with challenges and opportunities that arise. Our case study examines the introduction of AI for improving patent drafting in an Australian professional service firm (PSF) that specializes in Intellectual Property (IP). This project is part of a larger research project to study the digital transformation of the firm. In this empirical paper we ask: how do patent attorney's make sense of the disruption to extant practices by AI? We find that the introduction of AI triggered self-questioning identity work (e.g. Beech et al., 2016) for patent attorneys working in IP firms. Surprisingly, we found that for patent attorneys, 'feelings' as form of intuitive decision-making (Dane et al., 2012) play an important role in the process of patent drafting. We conceptualize talk of 'feelings' as a discursive strategy to cope with the ambiguity of their work (Jarrahi, 2018) that has implications for the introduction of AI to the patent drafting process.

Context of patent attorneys in IP firms

Australian patent attorneys are facing significant challenges to their traditional practices. The patent attorney profession is a highly regulated one requiring adherence to ethical standards and masters level qualifications that satisfy prescribed knowledge requirements (*Patents Act*

1990 & Patents Regulations 1991). In the legal profession, patent attorneys are increasingly required to become business oriented and client centric (Lodewyke, 2017) as the IP industry becomes rapidly corporatized. Increasingly, the scale, nature of work and prevailing partnership structures of IP firms are limiting both investment opportunities and ability of PSFs to respond to these challenges (Olakivi and Niska, 2017) .

Pressure on PSFs to adopt corporate structures is not new (Greenwood et al., 1996; Cooper et al., 1996; Greenwood et al., 1990). Interestingly, in what is fast becoming an Australian phenomenon, more than half of Australia's largest patent attorney firms have been publicly listed on the Australian Stock Exchange (ASX) in the 3 years between 2014-2016. Mergers and acquisitions are still on the rise and listed firms are now controlling almost 70% of the market share of Australian patent filings (Buck, 2017).

In these changing organizational contexts, conflicts between rapidly advancing smart technologies including AI (Zuboff, 1988; Leetaru, 2016) and powerful discourses of professionalism (Scott, 2008; Noordegraaf, 2016; Evetts, 2011) may undermine the identity of the professional worker by disrupting traditional professional practices. For example, new entrants coming in with online platforms make use of AI solutions that are disrupting extant professional practices such as, the profitable filing end of the process (Mastio and Dovey, forthcoming).

The aim of our research is to enrich our understandings of the influence of emerging AI technologies on professional practices and identity from the ground-up. These understandings are significant because; although AI and smart technologies are changing the work of human experts by disrupting traditional ways of working (Susskind and Susskind, 2015), this paper builds on discussions of 'how the unique strengths of humans and AI can act synergistically' (Jarrahi, 2018: 3) .

Data collection

This empirical paper draws upon the lived experiences (e.g. Schwandt, 1994) of the work of patent attorneys, during the development and deployment of an AI tool in an Australian IP firm. The technological scope was to create a visual framework assisted by AI to help attorneys when describing inventions and locating the pre-existing patents that the attorneys refer to as ‘closest prior art’. During this process, AI artefacts were co-developed and tested by a group comprising: 2 junior attorneys, 2 partners and 2 senior attorneys. Data were collected during a period of 7 months from November 2017 to March 2018 through four focus groups (made up of the six attorneys), designed to stimulate reflection-in-action and facilitate collective sense-making (Weick, 1995). Attorneys were asked to perform patent claim analysis and codification tasks, separately, that were later compared and discussed collectively. After attorneys had tested and evaluated aspects of the AI framework, we observed their lived experience and augmented our observations by asking open ended questions about the relevance and pertinence of the AI tool. The focus groups lasted 90 minutes on average and recordings were made that were subsequently professionally transcribed (75,000 words total). The research was conducted from an interpretive discursive perspective (Heracleous, 2004) to produce a rich account of ‘what is *actually* going on’ from an attorney’s perspective. To further explore some of the emerging findings, we recorded 3 open-ended interviews averaging 50 minutes: two with the Chairman of the firm, who was also a participant and one with a senior partner (not participant) who was teaching patent drafting at university. These interviews were also recorded and transcribed verbatim (29,000 words total).

Conclusions

In the legal and IP sectors, AI is becoming a key success factor — a must-have to participate in the competitive landscape. AI has already disrupted document retrieval tasks within the legal sector. Importantly, AI has the potential to provide more clarity in the patent space which will allow for infringement risks to be more readily assessed. Our specific contributions are to emerging research on the impact of AI on professional practices and identities (e.g. Jarrahi, 2018; Parry et al., 2016). The intention is to encourage regulators, practitioners and educators from diverse fields to think more widely and strategically about the challenges and new opportunities that may surface in this time of heightened change.

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