

## LEGAL CHATBOTS – CHARACTERISTICS, RECENT DEVELOPMENTS AND ETHICAL IMPLICATIONS

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### ABSTRACT

*This article introduces the idea of legal chatbots and how legal chatbots might affect the legal market in the near future. We define chatbots as computer programs that automatically chat with users and assess their potential for legal consultation. We identify four potential strengths of legal chatbots: providing access to justice, serving as contact points for customers, reducing the knowledge gap between lawyer and client and automatically generating documents and taking further actions. In the concluding section we briefly discuss ethical aspects of legal chatbots and possible future developments.*

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## I. WHAT ARE CHATBOTS?

Living in the 21st century it is sometimes hard to keep up with the newest technical terms and buzzwords. Really grasping the deep meaning and the consequences of terms such as „cloud computing“, „semantic web“ or „artificial intelligence“ is hard even for technical experts. Luckily „chatbot“ – the technical concept we are discussing in this article – is simple to understand. Chatbots are computer programs that automatically chat with users, either via text (think of chat platforms such as WhatsApp) or via natural speech (think of Amazon’s Alexa for instance). The user can ask the chatbot questions („Will it be raining tomorrow?“) and gets a (hopefully) useful answer („Tomorrow the weather will be sunny and you can leave your umbrella at home“). This is the essence of chatbots.

The strength of chatbots is to create a form of communication that resembles a natural conversation between humans. The first chatbots were already created back in the 1960s. Joseph Weizenbaum’s psychotherapist chatbot ELIZA is usually labeled as the first chatbot ever created<sup>1</sup>. On a very basic level ELIZA emulated the questions and answers of a psychotherapist and created the illusion for users that they were communicating with a real therapist. This conversational dialogue between user and computer program is the key characteristic of chatbots till this day and one of their main advantages.

Chatbots are now widely regarded as the successor of „apps“<sup>2</sup>. A few years ago apps were the latest trend and smartphone users installed a large number of apps on their phones for very different tasks. But the problem about apps is that many of them offer little additional functionality compared to the vendor’s website. Studies quickly found that many of the installed apps were therefore almost never used after they were installed.<sup>3</sup>

A second disadvantage of apps is the fact that they are splitting communication channels. To communicate with company A a user has to install app A and learn how it works. To communicate with company B the user has to install an additional app and find out how

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<sup>1</sup> Joseph Weizenbaum, *ELIZA—a computer program for the study of natural language communication between man and machine*, 9, COMMUNICATIONS OF THE ACM, 36–45 (1966); For a brief historical overview see: Collette Curry & James O’Shea, *The implementation of a storytelling chatbot*, Paper presented at the 5th KES International Conference, KES-AMSTA 2011, Manchester, UK (2011).

<sup>2</sup> See e.g. Marco della Cava, *Microsoft CEO Nadella: ‘Bots are the new apps’*, USA Today (Apr. 04, 2018, 01:30 PM), <https://www.usatoday.com/story/tech/news/2016/03/30/microsoft-ceo-nadella-bots-new-apps/82431672/> and *Bots, the next frontier*, The Economist (Apr. 04, 2018, 01:32 PM), <https://www.economist.com/news/business-and-finance/21696477-market-apps-maturing-now-one-text-based-services-or-chat-bots-looks-poised>.

<sup>3</sup> Sarah Perez, *Nearly 1 in 4 people abandon mobile apps after only one use*, TechCrunch Today (Apr. 04, 2018, 01:33 PM), <https://techcrunch.com/2016/05/31/nearly-1-in-4-people-abandon-mobile-apps-after-only-one-use/> and Kimberlee Morrison, *1 in 5 Apps Are Used Once — and Never Used Again*, AdWeek (Apr. 04, 2018, 01:33 PM), <http://www.adweek.com/digital/1-5-apps-used-never-used-infographic/>.

to use it. Chatbots solve this problem by creating an integrated and intuitive communication channel. In other words: most users know how to interact with a chatbot instantaneously because the communication style resembles human conversations.

Today chatbots are already used by many different companies in many different areas. They can be used via the company's website, Facebook Messenger, WhatsApp, Amazon's Alexa or similar platforms. Chatbots are especially deployed for customer support where they help customers with simple tasks and regularly asked questions.<sup>4</sup>

## II. THE POTENTIAL OF LEGAL CHATBOTS

While widely used in many different fields already the usage of chatbots for legal consultation has been very limited so far. The most prominent „legal chatbot“ is named DoNotPay and has helped people in the U.S. and in the U.K. to overturn 160,000 parking fines<sup>5</sup>. Yet, we believe that this is just the beginning and see a great potential for legal chatbots not only in the U.S. and the U.K. but also in Germany. We identify four main potentials of legal chatbots that might promote their dissemination.

### A. Chatbots can improve access to justice

The European Union Agency for Fundamental Rights (FRA) has found that access to justice is still a problem in several EU Member States. As FRA argues, this „is due to several factors, including a lack of rights awareness and poor knowledge about the tools that are available to access justice“<sup>6</sup>. We argue that legal chatbots might be able to improve this situation by providing accessible and easy-to-use tools for citizens who wouldn't learn about their rights otherwise. Similar to chatbots in general customer service legal chatbots could thus serve as initial entrance points that provide basic information and guidance. For more specific advice and analysis a legal chatbot could then bring in a human lawyer for advanced support.

### B. First Contact

The first dialogues between lawyers and their clients are often structured in similar ways. To gain a quick understanding of a situation lawyers routinely go through a pre-determined set of questions. This is a task that could be easily fulfilled by chatbots. From our

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<sup>4</sup> If the chatbot is unable to help the customer it often offers to bring in a human customer agent for further support.

<sup>5</sup> Elena Cresci, *Chatbot that overturned 160,000 parking fines now helping refugees claim asylum*, The Guardian (Apr. 04, 2018, 01:33 PM), <https://www.theguardian.com/technology/2017/mar/06/chatbot-donotpay-refugees-claim-asylum-legal-aid>.

<sup>6</sup> Access to justice, European Union Agency for Fundamental Rights (Apr. 04, 2018, 01:33 PM), <http://fra.europa.eu/en/theme/access-justice>.

perspective chatbots are therefore perfectly suited to serve as entry points for the communication with clients. In a first dialogue chatbots can collect basic information about a client and her case. This information can then be forwarded to a lawyer who is able to gain a first understanding about a case before she calls the client directly.

### C Tracking in the knowledge gap

The dialogue between lawyer and client is the prevalent form of a lawyer's daily communication. Yet, linguist studies have shown how effective communication is often hindered by the knowledge gap between the lawyer and the client. In other words, clients often find it difficult to understand the technical language of lawyers while lawyers routinely fail to grasp the needs and problems of their clients.<sup>7</sup> We argue that chatbots could help to bridge this gap between lawyers and their clients and enable more effective communication. Compared to a conversation with a lawyer, time pressure is significantly reduced when communicating with a chatbot. While communicating with a chatbot clients have much more time to understand complex legal concepts and might even take a short break in the chatbot dialogue to inquire about certain aspects before they continue. Clients might also feel less intimidated to ask specific questions and query about aspects they don't understand.

### D Generating documents and taking further actions

Since chatbots collect basic information from their users they can use this information to automatically generate certain documents as well. The chatbot of RATIS for instance provides a dialogue for users who were affected by a flight delay. After asking a set of questions about the flight delay the chatbot determines if the user is eligible to receive a financial compensation. If this is the case and the user agrees the chatbot automatically generates a letter to the respective airline claiming this compensation. This letter is send immediately and without any cost for the user.

## III. RECENT DEVELOPEMENTS

While legal chatbots such as DoNotPay have gained some early fame in the U.S. and the U.K. already in Germany we only saw theoretical discussions about legal chatbots until last year. Inspired by DoNotPay and others RATIS released RATISBOT, the first German legal chatbot, last summer.<sup>8</sup> When we launched RATISBOT it was able to help users in claiming compensation for flight delays. We have recently expanded the scope of RATISBOT to cover employment law and lay-offs and plan to add more topics in the future.

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<sup>7</sup> INA PICK, *DAS ANWALTICHE MANDANTENGEPRÄCH. LINGUISTISCHE ERGEBNISSE ZUM SPRACHLICHEN HANDELN VON ANWALT UND MANDANT* (1st. ed., 2015).

<sup>8</sup> Hendrik Wieduwilt, *Der Computeranwalt aus dem Donau Valley*, Frankfurter Allgemeine Zeitung (Apr. 04, 2018, 01:40 PM), [https://ratis.de/wp-content/uploads/2017/05/FAZ-15.5.2017\\_Der-Computeranwalt-aus-dem-Donau-Valley.pdf](https://ratis.de/wp-content/uploads/2017/05/FAZ-15.5.2017_Der-Computeranwalt-aus-dem-Donau-Valley.pdf).

Yet, at this stage we regard RATISBOT mainly as a proof-of-concept. RATISBOT employs some basic Artificial Intelligence techniques (mainly in the area of Natural Language Processing) but is far from using their full potential. While we believe that legal chatbots have a bright future we also think that the dissemination of this new technology will take a while. The underlying technologies need to get more mature and more sophisticated first.

Right now, the usage of many chatbots is not as convenient as it could be. Even the most sophisticated chatbots regularly fail to understand their users or are having problems with trivial small-talk situations. Additionally, end users also have to get used to the idea of talking to machines. But companies such as Amazon, Google, Apple or Microsoft are rapidly paving the way for an increased acceptance of chatbots and are constantly improving the user experience. While we believe that it will take several years till we see the widespread use of legal chatbots these developments also raise important ethical questions that need to be addressed at this early stage already. We would like to briefly discuss some of them in the concluding section.

#### IV. ETHICAL ASPECTS AND FUTURE DEVELOPEMENTS

Just naming companies such as Amazon or Google in the context of (legal) chatbots immediately raises the issue of privacy. We share the concern of privacy and chatbots. Yet, we believe that this is a problem that nowadays affects all digital types of client-lawyer communication as well and is not limited to chatbots. Today it is common for lawyers to electronically communicate with their clients and store their data in digital databases and files, often at remote servers or in the „cloud“ (which is just a more sophisticated term for remote servers). All these forms of communication are sensible to the privacy questions. We therefore regard privacy as an issue that is not characteristic for chatbot communication and therefore do not discuss it here.<sup>9</sup>

##### A. Human-Computer interaction

An ethical aspect that affects chatbots specifically is what we would label „pretended intimacy“. Assuming a high level of natural language recognition and given the conversational format of a chatbot communication it might be possible for clients to forget that they are actually communicating with a machine. This phenomenon has been described by Joseph Weizenbaum, the inventor of the first chatbot ELIZA, already: „I was startled to see how quickly and how very deeply people conversing with DOCTOR [the script

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<sup>9</sup> As a general rule-of-thumb to deal with the question of privacy in our digital times we would make the case for the following best-practice: 1. explain possible risks to users, 2. provide alternatives for users (phone, snail mail, etc.), 3. self-host your applications and data where possible.

ELIZA used] became emotionally involved with the computer and how unequivocally they anthropomorphized it“.<sup>10</sup> We regard it as crucial for the ethical development of legal chatbots to avoid this pretended intimacy. This includes being transparent about the fact that the client is actually chatting with a machine.

From our perspective such transparency caters to an additional strength of chatbots. In fact, we would hypothesize that many people may find it easier to talk to a machine about sensitive issues than to a human lawyer. As outlined in section II, chatbots could thereby help to bridge the gap between lawyer and client by providing a first opportunity to explore and probe certain sensitive issues and receive basic legal advice for them without opening up to a human lawyer.

Consider the example of a patient’s provision (Patientenverfügung) for instance. Drafting such a document involves sensitive questions regarding death, illness, the value of life and many other ethical questions. A client might feel more comfortable to explore her own positions in a conversation with a chatbot than with a human lawyer she has never met before. A well-developed chatbot could use algorithms to translate the moral positions and general attitudes of a client in a concrete draft of a patient’s provision. This draft could provide the base for a more detailed conversation with a human lawyer.

## B. Are chatbots taking the jobs of lawyers?

Another ethical question regarding chatbots in general concerns their effect on our work-life. Put most bluntly, the question is if chatbots are taking the jobs of lawyers (and many others)? Much ink has been spilled on the question which jobs are likely to be replaced by robots or algorithms.<sup>11</sup> Concerning the legal profession we find Frey and Osborne’s position most sensible and realistic: „we find that paralegals and legal assistants – for which computers already substitute – in the high risk category. At the same time, lawyers, which rely on labour input from legal assistants, are in the low risk category. Thus, for the work of lawyers to be fully automated, engineering bottlenecks to creative and social intelligence will need to be overcome [...]“<sup>12</sup>.

While lawyers themselves might not be replaced by new technologies such as chatbots, chatbots might still have a substantial effect on the legal job market and reduce the number of jobs for paralegals and legal assistants. Yet, this problem is not limited to the legal

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<sup>10</sup> WEIZENBAUM JOSEPH, *COMPUTER POWER AND HUMAN REASON. FROM JUDGMENT TO CALCULATION* 6 (1st ed., 1976).

<sup>11</sup> For a good overview see Alan S. Blinder, *How Many U.S. Jobs Might Be Offshorable?*, CEPS WORKING PAPER NO. 142 (2007) and Araw Mahdawi, *What jobs will still be around in 20 years?*, *The Guardian* (Apr. 04, 2018, 01:49 PM), <https://www.theguardian.com/us-news/2017/jun/26/jobs-future-automation-robots-skills-creative-health>.

<sup>12</sup> Carl Benedikt Frey & Michael A. Osborne, *The Future of Employment : How Susceptible are Jobs to Computerization?*, 114 *TECHNOLOGICAL FORECASTING AND SOCIAL CHANGE* 254 (2017).

professions alone but challenges the fabric of our whole social system and our welfare states. Realizing this potential social disruptions, this is why many technological leaders in Silicon Valley and around the world have begun to embrace a universal basic income or similar ideas to mitigate these social effects.<sup>13</sup>

Whatever the outcome of these developments and discussions will be we are certain that the legal market will profoundly change over the next few years. The emergence of legal chatbots is just one aspect of this broader development. We would argue that whether one appreciates these changes or not it is crucial to understand them. We hope that this article has made a small contribution in understanding the challenges ahead.

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<sup>13</sup> Jathan Sadowski, *Why Silicon Valley is embracing universal basic income*, The Guardian (Apr. 04, 2018, 01:49 PM), <https://www.theguardian.com/technology/2016/jun/22/silicon-valley-universal-basic-income-y-combinator>.