INTRODUCTION

“We are not a law firm or a substitute for an attorney or law firm. We cannot provide any kind of advice, explanation, opinion, or recommendation about possible legal rights, remedies, defenses, options, selection of forms or strategies.”1

When machines take the place of persons in providing certain services, what is considered a marketable skill for the human service provider changes. With many fearing inevitable doom, even the value of highly skilled, white collar professionals is called into question.

Some in the legal field believe this fear to be the fatal flaw in the legal profession’s general attitude towards technology, that it hampers the potential of the industry in the United States.2 Legal Zoom’s disclaimer above provides an appropriate reminder of the limits of machine-based services. It illustrates how the industry of online legal assistance will create efficiency in the provision of legal services, but as a supplement to, not a replacement of, attorneys.

Joshua Browder, founder and creator of donotpay.co.uk, is not out to turn the legal world upside down, merely to turn it right side up. The DoNotPay (“DNP”) website is powered by software to help individuals appeal parking tickets at a quicker pace, without further assistance.

---

DNP is accessible to users in the United Kingdom, New York, and Seattle. Since Fall 2015, it has successfully overturned $4 million worth of tickets. While anyone can use the website, it is an especially valuable service for individuals who cannot navigate, or afford to navigate, the arduous and frustrating bureaucracy of their local parking enforcement. Browder has replicated DNP’s framework to create software that assists individuals in seeking housing aid and assistance in the United Kingdom; travelers in receiving compensation for delayed flights; customers in requesting credit for bank overage charges; and HIV-positive individuals in retaining a digital ledger of their disclosure to a partner for legal purposes.

The technology behind DNP has been in use for years, but it is the idea behind what Browder calls an “asylum bot” that sets him apart from other coding engineers and start-ups. A bot refers to certain type of software that automates tasks such as placing orders, making reservations, or filling out forms. The most commonly used bots function in the form of a chat bot which mimics human-to-human conversation to complete such tasks. The asylum software would assist individuals seeking asylum in the United Kingdom to fill out their asylum applications. The asylum software is currently in production and was set for a controlled trial run in September 2016. Its potential demonstrates a possible future of bots and software in the legal field. In order to understand that future, however, it is important to understand the technological and legal background that makes this software useful.

THE TECHNOLOGY BEHIND THE DNP

In their simplest forms, software similar to DNP is used to provide answers to frequently asked questions and services, such as ordering pizza through Domino’s Pizza bot “Dom” via a request in text form. An example in the legal world is Bloomberg Law’s Draft Analyzer tool, Exemplify.

---


4 Telephone Interview with Joshua Browder, Founder, DoNotPay (Sept. 16, 2016).


6 See Amir Shevat, To bot or not to bot, VENTURE BEAT (Apr. 29, 2016, 5:05 PM), http://venturebeat.com/2016/04/29/to-bot-or-not-to-bot/.

7 Telephone Interview with Joshua Browder, supra note 4.

8 Id.

Exemplify stores thousands of contracts for various transactions collected from Bloomberg’s own database and the Securities and Exchange Commission’s (SEC) EDGAR database. EDGAR collects various filings submitted by companies in accordance with SEC requirements. Exemplify allows attorneys not only to compare standard language between law firms, but to add specific terms in templates created from sample contracts.

The technology behind DNP goes beyond the word comparison functionality of the Bloomberg software. Primarily, DNP acts as a legal translator. Individuals add the necessary information, such as where the parking ticket was issued, their driver information, and details of the surrounding area for context. When an individual describes their situation, most do so in plain (and often ambiguous) language. This plain language is then translated by a natural language processor into precise legal terms. For example, DNP has been taught to interpret “I couldn’t see the sign” as “the parking sign was not visible to the reasonable driver, and therefore the warning was insufficient,” or something similar. With every subsequent answer, the software proceeds down a different plausible path on a decision tree to find the strongest grounding for an appeal. Each of these plausible paths on the decision tree were collected by Browder’s team through an analysis of data retrieved via requests through the United State’s and United Kingdom’s respective Freedom of Information Acts (“FOIA”). The most successful rationales, as determined by the FOIA data analysis, are used as the backbone for an appeal. After the information for the appeal is collected, the appeal itself is prepared.

The appeal is then communicated to the parking authority. Due to the fact that DNP and the parking authority were not created by the same individual or company, they likely operate different systems and thus need a “common boundary” to communicate. DNP uses an application program interface (“API”) to communicate with the parking authority. An API serves as a middleman between an individual and an application, similar to a waiter in a restaurant who communicates a customer’s order to the kitchen. An API (waiter) presents individuals with a list of options (the menu) they can request.

---

10 Id.
11 Natural language is the everyday spoken and written words humans use. The processing is what an application will do to understand and analyze natural language. See Peng Lai “Perry” Li, Natural Language Processing, 1 GEO. L. TECH. REV. 98 (2016).
12 That process can be compared to the quizzes found in lifestyle magazines: “Do you wear white at least once a week? If yes, go to question 4. If no, go to question 10.”
13 Telephone Interview, supra note 4.
The API (waiter) takes down an individual’s request and is the medium by which the order is delivered to the opposing software that processes the information (the kitchen). In this analogy, the kitchen responds by preparing the meal based on the order and the waiter delivers the meal back to the customer. Similarly, an API accepts an individual’s request and returns the relevant data or final product (in the case of the DNP, the appeal).\footnote{Id.}

While the technology behind DNP forms the backbone of the asylum software, the issues that the asylum software handles are considerably different. The Syrian refugee crisis in the last few years has changed the demographics of many countries accepting refugees or asylum seekers. The biggest roadblocks in the asylum process are understanding another country’s legal system, translating a different language, and affording the necessary legal representation. The asylum software seeks to alleviate these issues. In order to understand its capabilities and scope, it is important to understand the basic and different asylum processes in the United Kingdom and in the United States.

**Immigration Law in the United States and the United Kingdom**

When a refugee in the United States first applies for asylum, they are scheduled for an interview with an asylum officer who determines whether or not to grant asylum. The officer bases their decision on a 30-60-minute interview that gauges the refugee’s credible fear of persecution. If the officer cannot approve asylum at this first stage, the refugee is referred to appear before an immigration judge in the Executive Office for Immigration Review (EOIR). At this stage, a refugee would strongly benefit from an immigration attorney, but many cannot afford one. The fact-finding process under EOIR differs from regular court proceedings, as immigration judges are Article I judges operating under the Department of Justice. This means that the proceedings do not follow the Federal Rules of Evidence and that judges are not bound by case law precedent.\footnote{See Karen T. Grisez, *The ABCs of Representing Unaccompanied Children in Removal Proceedings*, AM. BAR ASS’N, 30 (2008), http://www.americanbar.org/content/dam/aba/administrative/immigration/UACBasicsImmCtOct2014.authcheckdam.pdf.} The fact-finding process, therefore, depends more on the judge’s discretion and not necessarily the legal standing and facts, making the chances of success very slim, even with an attorney.
In 2015, 69,933 refugees entered the United States. Of the 84,182 applications filed (taking into consideration that refugees have one year to file an application so some of those who filed entered the United States in 2014), the U.S. Citizenship and Immigration Services Asylum Division managed to process only 40,062. Of the 40,062 applications, 15,999 or 39% were granted asylum by the asylum officer and 17,943 were referred to an immigration judge. Of the applications referred to an immigration, usually less than half are successful.

The asylum process in the United Kingdom is somewhat similar. The first step for a refugee is to submit an application. The applicant must meet certain criteria, such as an inability to return to the home country and persecution for an enumerated set of reasons. As long as the applicant meets the criteria and does not pose a national security threat as determined by the Home Office (the equivalent of the Department of State in the U.S.), they are granted asylum and possibly housing and health benefits. If the application is denied, then the refugee proceeds in front of a judge. Although it is unclear how many refugees entered the United Kingdom in 2015, about 25,711–38,900 people applied for asylum. Of these, about 35% were granted asylum and

---

19 Id.
about 65% were referred to an immigration judge.\textsuperscript{25} Of these appeals, only 30% were successful.\textsuperscript{26}

It is important to note that the statistics are impacted by certain realities. Given the dangerous and clandestine ways refugees may enter a country, many go unaccounted for. Additionally, refugees who enter in one year may not file applications in that fiscal year which creates a gap between the number of refugees who enter a country in a year and the number of refugees who apply for asylum in that year. Administrative delays also affect the statistics; applications that are denied or granted may not be representative of refugees who either entered the country that same fiscal year or filed applications that fiscal year.

In the United Kingdom, the asylum software handles the initial application process, with a focus on basic access to justice. Browder and his team claim that refugees are accepted into the United Kingdom and granted asylum in the initial application phase at a higher rate than in the United States.\textsuperscript{27} This is one of many possible reasons why a software that streamlines document production and form processing for refugees has a greater capacity to make a difference in the United Kingdom. As long as an individual meets the criteria\textsuperscript{28}, asylum is granted. As discussed, however, the actual rate at which each country accepts refugees and grants asylum is not divergent enough to attribute the greater feasibility of the asylum software in the United Kingdom, as opposed to the United States, to its asylum process or policies. It is likely that the expected success of the asylum software hinges on a factor external to the legal issues, possibly the United Kingdom’s government’s and British society’s perspective on refugees and asylum.

The current version of the asylum software is designed for Syrian refugees: it translates from Arabic into English, and British charities that work with Syrian refugees assisted in the trial run. Syrian refugees, however, have the highest rate of asylum-approval in the United Kingdom out of the various nationalities that apply; about 86% of Syrians who apply are granted asylum.\textsuperscript{29}

\textsuperscript{25} National Statistics, Asylum, supra note 20; see also Migration to the UK: Asylum, THE MIGRATION OBSERVATORY (July 20, 2016), http://www.migrationobservatory.ox.ac.uk/resources/briefings/migration-to-the-uk-asylum/ (stating that 70-86% of applicants that were rejected filed an appeal and of those, 28% were granted asylum, 65% dismissed, and 7% withdrawn).

\textsuperscript{26} National Statistics, Asylum, supra note 22.

\textsuperscript{27} Telephone Interview, supra note 4.

\textsuperscript{28} Claim asylum in the UK, supra note 21.

\textsuperscript{29} Compare Asylum statistics Annual Trends, supra note 24 (stating 86%), with National Statistics, Asylum, supra note 22 (stating 87%). While there are a certain number of applications submitted, not all of them are reviewed. This fact slightly affects the statistic.
This could be due to a combination of the exigent circumstances in Syria and the recent upsurge in placing Syrians in stable homes. The asylum software could also be built to assist individuals from countries such as Pakistan who have a high rate of application but low rate of approval. Of course, each country has its policy reasons for directing attention to one group of immigrants over another; this may require Browder to make certain strategic decisions in creating and making his website accessible in certain countries.

TECHNOLOGY OF THE ASYLUM SOFTWARE

Due to the complexities of immigration law, the asylum software operates under a more complex framework than the DNP software. Whereas the DNP software had to translate layman’s English to English legalese, the asylum process involves a more challenging initial step: the translation from Arabic (the language most of the refugees speak) to English, not only literally, but structurally and relationally. Translating the tragic story of a single mother’s escape from religious persecution at the hands of a tyrannical ruler is a different feat than translating the basic transcript of how one received a parking ticket. To tackle this, the asylum software will be operating on IBM’s Watson platform, which is a question answering computer system. Unlike the natural language processing used in Browder’s other software that take natural English and match it with the appropriate legalese, Watson goes above and beyond. It not only translates the Arabic into English, but it also closes the gap of what is lost in translation. Watson is able to understand the context of the Arabic text without being limited to only what is written. It does this by consuming enormous amounts of information and then undergoing manual programming through a series of questions that teach it how to interpret intent and draw inferences, just as a human does.

Watson also incorporates machine learning into its API. Machine learning is a method of pattern recognition and trial-and-error which allows

---

30 Asylum statistics Annual Trends, supra note 24, at 3 (“…among countries with relatively large numbers of applicants, Pakistan…had well above average refusal rates.”); see also National Statistics, Asylum, supra note 22.
31 Id.
32 Recall when Ken Jennings, the Jeopardy! contestant who won 74 games in a row but was defeated after losing to a computer—that was Watson.
computers to gain understanding without information being manually programmed by a human. This method, called feature selection, describes when a software algorithm (a set of instructions) parses data and selects only the information that is relevant to creating the final product. Each time Watson learns new information from an asylum seeker’s application, such as the name of a town the applicant is from or fled to, or the dates of bombings that displaced multiple families, it stores that information because it is relevant to building an asylum application. Watson can then refer to that information when it needs to understand the details of a subsequent application. The more stories and (successful) applications Watson ingests, the more relevant, stronger, and quicker its subsequent responses and applications will be.

LEGAL TECHNOLOGY IN THE UNITED STATES

Browder’s software and other technology that streamlines administrative legal tasks have been a source of fear for many attorneys. While our society is accustomed to machine-led labor, it has mostly been in the context of manufacturing and customer service. Attorneys, however, develop creative arguments and engage with other legal practitioners such as judges. This makes an attorney’s role more interactive, less formulaic, and thus more necessary in a complex adversarial proceeding. Bureaucratic processes, however, such as parking tickets, reimbursements, and now initial applications for asylum in the United Kingdom, are less reliant on creative legal arguments and more about the logistics of meeting certain criteria. Browder’s software alleviates an administrative legal task that is a burden for a majority of individuals whose only brush with the law is minimal in scope but impactful to

35 Rob Schapire, COS 511: Theoretical Machine Learning- Lecture #1, PRINCETON (2008), http://www.cs.princeton.edu/courses/archive/spr08/cos511/lecture_notes/0204.pdf (“So in general, machine learning is about learning to do better in the future based on what was experienced in the past.”).
their lives. The technology does not threaten the crux of the legal profession and does not decrease the value of human legal representation.

Some argue, however, that even alleviating a burden requires regulation and compliance with the same Model Rules of Professional Conduct that govern attorneys. Fixed, an application (“app”) in the United States that worked similarly to Browder’s DNP software, was suspected of violating ethics rules in 2015.\textsuperscript{38} The app, which appealed parking tickets, was met with criticisms that the humans behind it—non-attorneys who were experts in parking regulations—were operating as attorneys, a violation of the law. These experts served as a set of analytical eyes and reviewed the substance of an appeal letter before it was mailed in.\textsuperscript{39}

For areas of the law that require little legal expertise, such as traffic violations, DNP is sufficient. An attorney’s skills, however, are more of a necessity for issues and areas of the law that truly require knowledge, insight, and guile. For example, because immigration judges in the United States are not bound by precedent, their discretionary decisions are more easily influenced by argumentative orations and appeals to emotions. With a decrease in the amount of applicants granted asylum after their initial interview and an increase in the amount of referrals to immigration courts, the importance of an attorney in the courtroom is only expected to increase.\textsuperscript{40} The courtroom presentation of computer-made appeal is akin to reading \textit{Macbeth} in English class, whereas zealous human advocacy is akin to watching Ian McKellen play Macbeth at the Royal Shakespeare Company.\textsuperscript{41}

Technology that streamlines bureaucratic processes and molds to the idiosyncrasies of the applicable law should be viewed as alleviating a burden rather than an existential threat. Attorneys may take advantage of the software for small profit.\textsuperscript{42} For example, adopting such software into an immigration

firm’s website could offer asylum services at a reduced price because there would be minimal maintenance and labor costs. Whether incorporating software into firm practice establishes an attorney-client privilege would depend on how involved humans would be on the backend of the software (i.e., are attorneys reviewing each form before it is sent or merely maintaining or updating the software).

The pushback against Fixed demonstrates the obstacles that developers of legal technology face. By changing the narrative from “my job is at risk” to “this helps me do my job,” the legal profession can ensure a better working relationship with the technology industry, and reduce the access to justice gap that prevents needy and indigent individuals from receiving legal redress. Whether the asylum software launches in the United States remains to be seen, but it is likely that software such as DNP will soon become commonplace in the legal field.