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# **TTLF Working Papers**

**No. 26**

**The Art of Contract Drafting in the Age of  
Artificial Intelligence: A Comparative Study  
Based on US, UK and Austrian Law**

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# TTLF Working Papers

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## **Abstract**

Contract drafting is a skill that is traditionally mastered by lawyers. However, with the boom in legal technology, computers may soon become proficient in this as well. In the last few years, much software that addresses contract drafting and preparation has been developed and released into the market; some examples include proofreading assistants, clause checking, and smart contracts driven by blockchain technology. However, can machines – in particular artificial intelligence (“AI”) – be competent enough to eventually take over the function of drafting contracts from lawyers? And if so, what are the legal, economic and social consequences of this ‘robot lawyer’? This paper hopes to provide readers with an overview of how AI and contract drafting may function together, and analyze the impact of such computer generated contracts and computer generated contract software from a legal, economic and societal perspective.

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## Foreword

As a newly qualified lawyer in this digital world and having recently begun work as an in-house counsel, I wanted to conduct research in an area that involved using technology to improve the practice of law. I enjoyed reading contract law during my undergraduate years; later on, I drafted, proofread and reviewed contracts for a living. As an in-house counsel, I have always been driven to find efficient solutions to my work, and it was only a matter of time that the thought of contract automation crossed my mind. The core idea behind this thesis was thus in a sense conceived from my desire to make my life easier at work. However, after several discussions with my supervisor, Dr. Lukas Feiler, and my brother and friends, I realized that this field is more complex than it appears – *what would happen to the legal industry, to people who use such software, and even from an academic point of view, to the general principles of contract law?*

This paper is a culmination of these thoughts presented in a (hopefully) structured and comprehensible manner. I am extremely grateful to my supervisor, Dr. Lukas Feiler, for his wisdom, guidance and patience in the supervision of my paper. I would also like to extend my gratitude to ao. Univ.-Prof. Siegfried Fina from the University of Vienna and Dr. Roland Vogl from Stanford Law School for supporting me in my research, and giving me the opportunity to conduct research as a Visiting Fellow at Stanford Law School. Special thanks to my colleagues at CMS Reich Rohrwig-Hainz GmbH for their advice, help and encouragement. I would also like to extend my gratitude to my friends, Nisha, Renato, Jia, and Arianto as well. Last but not least, I am ever grateful to my family, friends, and Primoz, for their unwavering support in my endeavors. This paper is dedicated to my family, friends, teachers, and especially to my granduncle, Mr. Ng Boon.

# 1 Introduction

On June 25, 2016, the words “March of the Machines” were splashed across the front page of *The Economist*.<sup>1</sup> *The Economist* had dedicated a special report on artificial intelligence (“AI”), which discussed about the several issues concerning this technology, which had recently seen a resurgence in interest and funding: the development of a new AI technology called ‘deep learning’, the anxiety behind AI, education, and ethical policies.<sup>2</sup> At the same time, the legal industry is facing a surge in the development and interest of legal technology, which has affected almost every aspect of traditional lawyering: online dispute resolution and e-discovery management systems have made an impact in the litigation scene, while due diligence systems and document automation engines enter corporate lawyering.

The impact of legal technology has led to commentators discussing about the ‘uberization’ of the legal industry<sup>3</sup> and how the future of lawyers will change drastically. Contract drafting is one such potential area, which has been traditionally mastered by lawyers. In the past, lawyers sat down at the table and drafted, well equipped with their quills and legal acumen. However, the last century saw rapid technological advancements, and lawyers have jumped onto this technology bandwagon. Moving from drafting contracts with a pen to a typewriter, modern day lawyers have now adapted to word processing software to draft their contracts. High-tech software has also been developed to help lawyers proofread and cross-reference their drafts faster, thereby

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<sup>1</sup> THE ECONOMIST: SPECIAL REPORT ARTIFICIAL INTELLIGENCE (June 25, 2016).

<sup>2</sup> *Id.*

<sup>3</sup> Michael Skapinker, *Technology: Breaking the Law*, FINANCIAL TIMES, Apr. 11, 2016, <http://www.ft.com/cms/s/0/c3a9347e-fdb4-11e5-b5f5-070dca6d0a0d.html#axzz4DhLnvXou>.

increasing efficiency in law firms.<sup>4</sup> Even though lawyers have benefited from technology, the reality is as such – technology has, likewise, the same potential to replace the lawyer – by generating contracts without the client needing to seek a lawyer. Through the Internet and smartphone applications, businesses can now avail of contract generating tools or standard form contract templates that can generate simple contracts. These tools allow businesses or clients to bypass the need to seek legal advice, thereby saving costs. These tools have also begun to eat into the lawyer’s share of the contract drafting services market, and it is not surprising to note that these new legal services – driven by AI – might eventually serve as strong competitors against lawyers in contract drafting.

The purpose of this thesis is thus simple – will the computer be able to replace the lawyer in contract drafting, and what are the consequences of this outcome? Justifying any answer to this question is not simple. This thesis therefore aims to tackle the question by first providing the history of AI and contract drafting, followed by a technical, legal, economic and societal analysis on the impact of the use of computer generated contracts (“CG contracts”) or computer generated contract software (“CGC software”), suggestions and views based on the evaluation, and finally a conclusion relating to the future of legal technology in the area of contract drafting.

When evaluating the legal consequences arising from the use of AI in contract drafting, this thesis will refer to the laws of the United States of America (“US”), the United Kingdom (“UK”) and Austria. This is relevant at Part 5 of this thesis, which deals with the legal aspect of the impact of CG contracts and CGC software. The choice of these three jurisdictions is due to similarities (federal-state for the US; supranational-member state for the UK and Austria) and differences (common law tradition for the US and UK; civil law tradition for Austria) that will render the analysis more interesting. The UK and

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<sup>4</sup> *Drafting Assistant for Transactions*, THOMSON REUTERS, <http://legalsolutions.thomsonreuters.com/law-products/solutions/drafting-assistant/transactional> (last visited Jul. 7, 2016).

Austria function under different legal systems, i.e. the common law system and the civil law system respectively, but are member states of the European Union (“EU”). While the UK has held a non-binding referendum indicating that it wishes to exit the EU,<sup>5</sup> no formal process to exit the EU has yet been triggered as of the submission of this thesis, and thus EU laws that are binding on the UK remain at status quo presently. However, readers of this thesis should be aware that the analysis provided herein might change as a result of the UK’s possible departure from the EU. The US, as a forerunner in this realm, serves as a good contrast to the UK and Austria where these legal issues are concerned. Furthermore, interesting comparisons between the EU member-state system and the US federal-state system can be made, especially when there is a compare and contrast of the regulations in each jurisdiction’s legal industry.

In conclusion, this thesis hopes to answer this question: whether the computer can replace the lawyer in contract drafting, and what are the consequences of the advent of this “robot lawyer”. As lawyers concern themselves with how technology has affected the law and legislation, due attention should also be paid to how technology has affected lawyers and their businesses. The greater goal of this thesis is thus to raise awareness amongst legal professionals that they must continue to stay relevant and creative in the legal industry – so as to prevent being outsmarted and outpaced by AI.

## **2 A Brief History on AI and Contract Drafting**

The word ‘contract’ is derived from the Latin word ‘*contractus*’,<sup>6</sup> which is in itself a portmanteau of two Latin words – ‘*con-*’ meaning ‘together’, and ‘*trahere*’ meaning ‘to

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<sup>5</sup> *EU referendum*, GOV.UK, <https://www.gov.uk/government/topical-events/eu-referendum> (last visited Jul. 7 2016).

<sup>6</sup> *Contract*, OXFORD DICTIONARIES, <http://www.oxforddictionaries.com/definition/english/contract>.

draw’.<sup>7</sup> While the Romans might have ‘drawn’ their contracts with a pen and paper, contracts since the last few centuries were written by hand. It was only until the 19<sup>th</sup> century where lawyers could type instead of writing a contract. The invention of the typewriter or writing machine could mean that “legal copying [...] will undergo a revolution as remarkable as that effected in books by the by the invention of printing”.<sup>8</sup> The use of typewriters has been widespread, and lasted for close to a century since commercial typewriters were invented in the 1870s.<sup>9</sup> With the turn of the century to the 20<sup>th</sup> century, the invention and commercialization of computers provided lawyers with new methods of drafting and proofreading contracts, such as the use of word processors and contract drafting software.

## ***2.1 The Development of AI and its Use in Legal Drafting***

It was with the invention of computers, AI and word processors in the 20<sup>th</sup> century that contract drafting became not just more efficient, but the possibility of contract drafting by way of machine automation also arose. The development and advancement of research in computers in the first half of the 20<sup>th</sup> century allowed researchers to engage in the research of AI, as more powerful computers enabled researchers to push and experiment with systems that exhibit intelligence. AI can be seen as “the study of how to make computers do things at which, at the moment, people are better.”<sup>10</sup> By the 1970s, inroads have been made into the interdisciplinary field of AI and law by making attempts to model legal reasoning and legal arguments,<sup>11</sup> culminating in various projects that

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<sup>7</sup> *Id.*

<sup>8</sup> Rufus M. Porter, *The Writing Machine*, 1017 SCI. AM. 3, 3 (1867).

<sup>9</sup> The Hansen Writing Ball is said to have been the first typewriter that was commercially produced. See Derrick Khoo, *Writing Round*, THE NEW YORKER (Oct. 20, 2010), <http://www.newyorker.com/books/page-turner/writing-round> (last visited Jul. 12, 2016).

<sup>10</sup> Lukas Feiler, *Artificial Intelligence and law: Achievements and failures*, May, 2004, [http://lukasfeiler.com/AI\\_and\\_Law-Achievements\\_and\\_failures.pdf](http://lukasfeiler.com/AI_and_Law-Achievements_and_failures.pdf) (last visited May 30, 2016).

<sup>11</sup> See Bruce G. Buchanan & Thomas E. Headrick, *Some Speculation about Artificial Intelligence and Legal Reasoning*, 23 STAN. L. REV. 40, (1970).

attempted to fuse AI with the practice of law. One such example is the Civil Code Legal Information Processing System, in which the system is “designed to retrieve relevant cases and statutes from a highly integrated and efficient data base, containing among other things, portions of the Civil Code of Louisiana”,<sup>12</sup> and it has been envisioned that this same system would be eventually capable of “[advising] the drafter of inconsistencies and other deficiencies that might result from, or be included in, the information entered”,<sup>13</sup> where statutory drafting is concerned. By the end of the 20<sup>th</sup> century, the development in this field led to some academics acknowledging that systems dealing with contracts are not only able to operate automatically but autonomously,<sup>14</sup> thereby igniting the debate as to whether “computer-generated transactions can stand on their own as legally enforced”.<sup>15</sup>

## ***2.2 Modern Day Contract Drafting in the 21<sup>st</sup> Century***

In the 21<sup>st</sup> century, technology plays a large role in modern day living, and technology has likewise crept into the legal industry. There has been a greater emphasis on the development of technology for the legal industry in recent years. This is also known as legal technology, or legal tech in short, and can be broadly defined as the use of technology or software to provide legal services. In 2015, the Stanford Centre for Legal Informatics or CodeX began categorizing these legal tech companies, and subsequently launched a website listing current legal tech companies in the market.<sup>16</sup> A quick search on this list reveals that several companies or start-ups have entered into the contract drafting

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<sup>12</sup> Cary G. Debessonnet & George R. Cross, *An Artificial Intelligence Application in the Law: CCLIPS, A Computer Program that Processes Legal Information*, 1 BERKELEY TECH. L.J. 329, (1986).

<sup>13</sup> See generally *id.*

<sup>14</sup> Tom Allen & Robin Widdison, *Can Computers Make Contracts?*, 9 HARV. J. OF L. AND TECH. 26, 27 (1996).

<sup>15</sup> *Id.* at 29.

<sup>16</sup> *Discover Legal Technology*, STAN. CTR. FOR LEGAL INFORMATICS (CODEX), <http://tech.law.stanford.edu/> (last visited May 25, 2016).

market by either offering the “fastest, easiest way to create and manage contracts”,<sup>17</sup> or to “spot both missing and extra clauses”.<sup>18</sup>

From the theoretical discussions in the 20<sup>th</sup> century on the use of artificial intelligence in drafting documents to the current developments in the legal tech scene, the development of legal technology makes it unsurprising that such contract drafting or document automation software entered the legal market. Companies such as Contractually, Clausehound, LegalZoom, and Dragon Law, amongst many others, are part of this start-up scene that are poised to compete with lawyers. For consumers and businesses, the entry of contract drafting software is generally a good development as they can now obtain legal advice or standard form contracts for a fraction of the price compared to retaining a lawyer for the same service.<sup>19</sup> On the other hand, lawyers are slowly being priced out of the industry – not by man, but by machine. Considering this potential takeover of contract drafting services by software, it is important to understand how AI and contract drafting works, and analyze the impact of such technological innovation in the legal and economic spheres. In order to do so, it is first important to establish the fundamentals of a contract and contract drafting, which will then serve as the pillar for subsequent discussions on how AI can produce a contract and the legal issues arising thereof.

### **3 The Contract Drafting Process**

A contract, in its plain and ordinary meaning, is a “written or spoken agreement, especially one concerning employment, sales or tenancy, that is intended to be

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<sup>17</sup> COUPA + CONTRACTUALLY, <http://www.contractual.ly/> (last visited Jul. 7, 2016).

<sup>18</sup> CLAUSEHOUND, <http://clausehound.com/> (last visited Jul. 7, 2016).

<sup>19</sup> Several websites provide free contracts that are available to download. See PRINTABLE CONTRACTS, <https://www.printablecontracts.com/> (last visited June 5, 2016). However, whether such contracts have legally effective clauses that are up-to-date is a separate question altogether.

enforceable by law”.<sup>20</sup> From a more legalistic standpoint, the word ‘contract’ is defined as “an agreement creating obligations enforceable by law”.<sup>21</sup> From these definitions, it can be fathomed that there exist many different family, genus and species of contracts. These can range from simple barter-trading contracts to complicated cross-border, multi-party joint venture agreements. Regardless of the type of contract, one key theme that flows in all contracts is its enforceability under the law – i.e. whether the contract will be deemed as valid and binding on all intended parties under the eye of the law.

Contract drafting should also not be confused with contract performance. Firstly, contract drafting falls into the broader category of contract formation. Contract formation involves parties “specify[ing] their requirements of each other, negotiat[ing] on the various aspects of the exchange which will take place and come to some agreement.”<sup>22</sup> On the other hand, contract performance involves the enforcing of the agreement, and where “business exchange between the parties actually takes place.”<sup>23</sup> This thesis is concerned with a narrower field of the former, i.e. that of contract drafting within the contract formation framework. Contract formation tools involve ensuring that a valid offer and acceptance exists, compatibility checking of parties’ requirements, and tools that help a drafter piece parties’ negotiations into one final product, i.e. the written document.<sup>24</sup>

From this, it can be envisioned that drafters have an important role when preparing the contract. They need to “define various terms”, “prescribe certain behavior for the parties”, “specify procedures that need to be followed by the parties when certain states of affairs are to be established”, prepare “formulae that are used to calculate values for various

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<sup>20</sup> OXFORD DICTIONARIES, *supra* note 6.

<sup>21</sup> *Legal Information Institute*, CORNELL UNIVERSITY L. SCH., <https://www.law.cornell.edu/wex/contract> (last visited Jul. 10, 2016).

<sup>22</sup> Aspasia Daskalopulu & Marek Sergot, *The Representation of Legal Contracts*, 11 AI & SOC’Y 6, 4 (1997), <https://arxiv.org/ftp/cs/papers/0106/0106005.pdf>.

<sup>23</sup> *Id.*

<sup>24</sup> *Id.*

parameters”, and specify “conditions, under which other provisions apply”.<sup>25</sup> Therefore, it is not surprising that drafting contracts is a skill that takes time to hone. The drafter has to ensure that the parties’ intentions are represented in the contract, the contract and its provisions therein are legally binding and valid, and will be enforceable against the parties. Furthermore, the drafter has to produce a contract that is consistent – not just in terms of the number of signatories and use of definitions, but also in the formatting of the contract, by ensuring that the contract complies to the ‘house style’ of the law firm,<sup>26</sup> where such ‘house style’ may include the firm’s logo, specific formatting preferences for the headings and body of text of the contract. Accordingly, the details that a drafter must pay attention to can be broadly distilled into two categories: the first category involves the *substance* of the contract, while the second category deals with the *form* of the contract.

### ***3.1 Substance of the Contract***

The substance of the contract refers to the content contained in the contract, such as the preamble, covenants, terms, representations and warranties, amongst others. This also includes other boilerplate clauses dealing with the choice of law, method of dispute resolution, and confidentiality issues. Depending on the type of contract, existing standards and rules of the target industry, and the complexity of the contract (in the sense of parties and jurisdictions), lawyers have to tailor the contracts that they prepare accordingly. For instance, a contract on the purchase and sale of a car can appear to be completely different from a tenancy agreement or a power purchasing agreement, in terms of the types of clauses present within the contract.

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<sup>25</sup> *Id.* at 9.

<sup>26</sup> See generally Ken Adams, *Adopting a House Style for Contract Drafting*, ADAMS ON CONTRACT DRAFTING, Jan. 29, 2009, <http://www.adamsdrafting.com/house-style/> (last visited Jul. 10, 2016); James Wilkinson, *Why many firms underestimate the importance of house style*, LEXISNEXIS: BUSINESS OF LAW BLOG, Jan. 5, 2015, <http://businessoflaw.lexisnexis.co.uk/why-many-firms-underestimate-the-importance-of-house-style/> (last visited Jul. 10, 2016).

Regardless of the type of contract or its inherent sophistication, lawyers that are hired to prepare the contract must ensure that the parties' intentions are properly expressed in the terms of the contract, ensure that the terms of the contract are enforceable against the parties involved, and foresee any potential difficulties or impossibilities that might arise from the execution of the contract, while at the same time protecting the interests of their client. Some of these contracts can eventually run into volumes, especially if the value of the deal is huge and there are many several parties involved in the transaction.

As the contract "reflects [the parties] agreement as to the rules that will govern their transaction",<sup>27</sup> several drafting considerations are critical in ensuring that parties' intention are well reflected. Apart from being able to translate "the business deal into contract concepts",<sup>28</sup> drafters need to include introductory provisions, define terms accurately, contemplate about possible conditions to an obligation, provide agreed methods for termination of the contract, and the inclusion (or exclusion) of boilerplate clauses.<sup>29</sup> More recently, drafters are encouraged to write in plain English by reducing legalese and archaic words, so as to ensure greater clarity and reduced ambiguity.<sup>30</sup>

To further understand the importance of properly drafting the substance of the contract, take for example the need for lawyers to provide definitions within the contract. A clause stating that "Party *A* must pay Party *B* within five days upon delivery of the goods" can itself be a cause for contention if the word "days" is not well defined. What does 'days' mean? Does it mean business days (where Saturday, Sunday and Public Holidays are excluded) or calendar days? To prevent ambiguity, experienced lawyers usually define such terms in the contract, as illustrated below:

## 1. Definitions

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<sup>27</sup> TINA L. STARK, DRAFTING CONTRACTS 3 (2nd ed. 2014) [hereinafter *Drafting Contracts*].

<sup>28</sup> *Id.*

<sup>29</sup> See generally DRAFTING CONTRACTS, *id.*

<sup>30</sup> *Id.* at 255.

‘Day’ and its plural form ‘Days’ refer to any day except for Saturdays, Sundays and Public Holidays.

## 2. Payment

Party *A* must pay Party *B* within five Days upon delivery of the goods.

## 3. Dispute resolution

If Party *B* does not pay Party *A* by the stipulated date as per in Clause 2, parties shall meet to negotiate and resolve the dispute within 30 days. If parties do not resolve the dispute by the aforementioned time, either party is entitled to seek relief by way of court proceedings or arbitration.

As seen above, ‘Days’ is defined in Clause 1. The word ‘Days’ now takes on a different meaning from ‘days’ by virtue of the capitalization of the first letter of the word.<sup>31</sup> Thus, in Clause 2, where payment must be within five Days, it will be interpreted to mean that payment must be made within five business days. However, in Clause 3, the ‘days’ in ‘30 days’ is not capitalized, thus it will not take reference to the earlier definition of ‘Days’ in Clause 1. In this case, it is quite clear that 30 days refers to calendar days rather than business days: if the lawyer so intended for business days to be used, he or she should have written “30 Days” instead of “30 days”.

Furthermore, in some types of contracts, the lawyer’s decision to include or exclude specific boilerplate clauses can prove to be decisive when litigation occurs. Boilerplate clauses are standard clauses that are usually inserted into contracts, typically at the end. These can include the dispute resolution mechanism, governing laws, confidentiality obligations, and applicable interpretation rules. One good example would be the dispute resolution mechanism clause. Most parties enter into contracts with the expectation that it will be fulfilled, and thus discussions over the dispute resolution mechanism may not be a

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<sup>31</sup> Unlike the English language, all nouns in German are capitalized at the first letter. Thus, defined terms in German contracts are either italicized, bolded or entirely in capital letters so as to indicate that the word in question has been defined.

deal breaker and glossed over. This may also mean that parties may settle for a standard dispute resolution clause without much consideration. What counts as “standard” varies according to industries.<sup>32</sup> The lawyer, however, must understand the implications arising from using a standard boilerplate dispute resolution clause. He or she must highlight this to his or her client quickly if he or she believes that the client does not understand the ramifications over using this standard dispute resolution clause, e.g. the difference between court proceedings and arbitration. The lawyer may subsequently have to amend or improvise the boilerplate clause if necessary, depending on the client’s instructions. Lawyers must therefore be able to understand the substance within boilerplate clauses, and include, exclude, or amend them readily, despite their common occurrence in contracts.

As seen from above, drafting a contract involves many skills– advanced language and writing abilities, legal research, prudence, and common sense. Even missing a simple definition such as the word ‘days’ can be costly, especially if there are liquidated damages clauses present. Furthermore, clients expect lawyers to make sure that their contracts are not void or voidable for illegality if it contravenes certain public policies or statutory laws. As much as substance of the contract is critical, as part of enforceability and professionalism, lawyers also pay attention to the form of the contract, which will be discussed next.

### ***3.2 Form of the Contract***

As compared to the substance of the contract, the form of the contract in this paper refers to other aspects of contract drafting that concerns itself with (1) the formalities of the contract, (2) grammar and spelling, and (3) formatting of the contract. The formalities of

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<sup>32</sup> For instance, in investment agreements, parties tend to prefer arbitration over court or adjudication. Thus, depending on the nature of the agreement and parties involved, the choice of dispute resolution mechanism may differ.

the contract include the signatories to the contract, whether a seal or company stamp is required to accompany the signature, and the witnesses to the execution of the contract. Although this may seem to be trivial, failure to observe proper formalities in the signing and execution of the contract can be disastrous, especially if there is a dispute on either the lack of capacity of the signatory to represent the organization. While the signing of the contract may fall under contract execution, lawyers can minimize problems arising from lack of capacity during the drafting phase. They can do so by indicating the signatory on the contract itself prior to signing, and stating that the director must accompany his signature with the company seal.

Furthermore, proper use of grammar and spelling and good formatting and presentation of the contract are part of professionalism in the business of law. Contracts that are written badly may not only reflect poorly on the law firm, but also become an issue in interpretation if it were indeed written so badly. Good formatting and presentation can facilitate the client's reading, and also serve as a mark of professionalism – lawyers, legal trainees, or interns proofread and make final corrections to the contract before it is engrossed for execution. Better clarity in terms of formatting can also be achieved through the use of sections and sub-sections, tabulation, consistent numbering systems, indentation and the inclusion of a 'Table of Contents',<sup>33</sup> which in turn helps to prevent contracts from being "a nightmare to read".<sup>34</sup> In recent years, companies such as Thomson Reuters have built 'contract drafting assistants' to do the same work – at a lower cost and higher efficiency.<sup>35</sup> This software by Thomson Reuters then sparks one interesting question: *what if the drafter is a machine?*

From the previous paragraphs, it has been assumed that the drafter is a lawyer or at the very least a legally trained person who has the ability to detect lacunas in the contract or

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<sup>33</sup> DRAFTING CONTRACTS, *supra* note 27, at 263-283.

<sup>34</sup> *Id.* at 263.

<sup>35</sup> THOMSON REUTERS, *supra* note 4.

suggest boilerplate clauses. People may seek the help for lawyers when the terms of the contract are lengthy and complex, and when the transaction value is large. However, the draftsman need not be a legally trained person as a layman can prepare his own contract, and there is generally no prohibition against a non-lawyer writing his own contract as long as he does not provide any legal advice to any other person. With the advancements of technology, AI has begun to step into the shoes of the draftsman. There is presently several software in the market that either assists the lawyer in contract drafting,<sup>36</sup> or provides consumers or businesses with readily accessible standard contracts at a much lower price or even free in some instances.<sup>37</sup>

Although there are no restrictions as to who – or in this case *what* – can be a contract drafter, many problems surface when a software is used to draft a contract. These problems will surface when, for instance, the contract generator software produces a contract that has legally unenforceable clauses, and the user of this contract generator is unable to have his contractual rights enforced in court. Who then should be liable for the generating the contract? The AI system or the developer of the AI system? This becomes more complicated when the AI system has been so robustly built that it is able to operate autonomously, and make a decision that a human would not be able to comprehend. These issues will be analyzed in Part 5.3, i.e. legal issues arising from the use of CGC software. Upon establishing that the contract drafter can be anyone or anything, i.e. man or machine, the next stage then is to thus evaluate how AI and technology has innovated existing drafting contract processes and whether its potential can be further harnessed – either by simplifying certain process or replacing lawyers in the drafting process altogether. In line with the aforementioned thoughts, the next section will then deal with the technical feasibility of the fusion of AI in contract drafting.

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<sup>36</sup> THOMSON REUTERS, *supra* note 4.

<sup>37</sup> PRINTABLE CONTRACTS, *supra* note 19.

## 4 The Use of Artificial Intelligence and Technology in Contract Drafting

According to the Boston Consulting Group and Bucerius Law School's report on *How Legal Technology Will Change the Business of Law* ("Legal Tech Report"), there are three main broad categories of legal tech, namely enabler technologies, support-process solutions and substantive law solutions.<sup>38</sup> The use of AI or legal tech in contract drafting is not a novel solution as seen in Part 2.2, and such legal tech can be largely seen as substantive law solutions, i.e. they either 'support or even replace lawyers in the execution of core legal tasks'.<sup>39</sup>

Within this category of contract drafting software and tools, there are further sub-categories: (1) the use of software to make the existing contract drafting process by lawyers or in-house legal counsels more efficient; or (2) the use of software to replace lawyers from the contract drafting process altogether. With regard to sub-category (1), a good example would again be the Thomson Reuters contract drafting assistant, which can 'quickly identify and assess potential drafting issues'<sup>40</sup> and reduce proofreading time for lawyers.<sup>41</sup> There are also other legal start-ups such as Clausehound that aims to "confidently point out the "gaps" in [the] counterparty's legal documents"<sup>42</sup> by "clause-match[ing] counterparty agreements against documents in [the client's] precedent bank and established standards to spot both missing and extra clauses".<sup>43</sup> Such legal tech can, for instance, ensure that the form of the contract (as per Part 3.2) is proper, thereby

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<sup>38</sup> CHRISTIAN VEITH ET AL, BOSTON CONSULTING GROUP & BUCERIUS L. SCH., HOW LEGAL TECHNOLOGY WILL CHANGE THE BUSINESS OF LAW (2016) 4-5, [http://www.bucerius-education.de/fileadmin/content/pdf/studies\\_publications/Legal\\_Tech\\_Report\\_2016.pdf](http://www.bucerius-education.de/fileadmin/content/pdf/studies_publications/Legal_Tech_Report_2016.pdf).

<sup>39</sup> *Id.* at 5.

<sup>40</sup> THOMSON REUTERS, *supra* note 4.

<sup>41</sup> *Id.*

<sup>42</sup> CLAUSEHOUND, *supra* note 18.

<sup>43</sup> *Id.*

increasing efficiency in law firms as lawyers will have to spend less time on menial tasks that can be automated and completed faster by software.

Sub-category (2), i.e. the use of software to replace lawyers from the contract drafting process altogether, merits greater evaluation. At present, legal tech is advanced enough to produce standard form contracts as long as there is a precedent provided to the contract generator, and to create simple, un-complicated contracts.<sup>44</sup> However, such tasks are simple in nature, and do not even need AI to be successfully executed. These are usually performed by automated contract generators, whereby there exists already a standard contract template (e.g. a standard tenancy agreement for the entire building) that contains tags or other meta-data. Users simply input the specific information in another program and this specific information will populate the tags or meta-data in the standard contract,<sup>45</sup> thus creating a new contract by itself.

What is more relevant for our discussion is the development of contract drafting software and tools beyond automatic contract generators and legal tech as described under sub-category above. At present, a developer named Joe Dewey created `contractCode`, which has the goal of building contracts based on a different principle unlike historical automated contract generators, and has uploaded its first contract form – that of a promissory note.<sup>46</sup> In his article, Dewey explained that this contract form is based on “code-based principles”<sup>47</sup> such as object oriented programming, and has further expounded that simple compliance logic can be built into such legal software to ensure that certain clauses will not fall foul of regulations.<sup>48</sup> Apart from AI systems potentially being able to read and thus generate contracts written with “code-based principles”, these

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<sup>44</sup> Joe Dewey, *What if we developed legal contracts like we developed software applications?*, MEDIUM (Apr. 3, 2016), <https://medium.com/@jndewey/what-if-we-developed-legal-contracts-like-we-developed-software-applications-6f8305256c5c#.6z774clv2> (last visited May 31, 2016).

<sup>45</sup> *Id.*

<sup>46</sup> See *contractCode Tools*, GITHUB, <https://github.com/jndewey/cctools> (last visited Oct. 13, 2016).

<sup>47</sup> *Id.*

<sup>48</sup> *Id.*

contracts may have the additional benefit of being able to be executed via blockchain technology, as a smart contract. This will be discussed in greater detail at Part 4.3.

Even though technology has already been used to draft simple contracts at present, this paper intends to explore whether AI has the potential to draft more complex and complicated contracts from a wide spectrum of industries. In order to analyze how AI can be harnessed to do so, it is first important to understand how AI functions in relation to contract generators, the present state of the development of AI, the capabilities and limitations of AI, and the development of smart contracts. This will serve the basis for analyzing how more complicated contracts can be drafted by CGC software.

#### ***4.1 Present State of the Development of AI***

The term ‘AI’ is not new; in fact, this phrase has been made popular to the general public with Hollywood’s blockbuster film in 2001, entitled “A.I.”.<sup>49</sup> AI, however, is not so much about a robotic boy learning to fall in love, but rather the use of computers or machines to perform tasks that require human intelligence.<sup>50</sup> More recently, AI made headways earlier in 2016 when an AI software, AlphaGo, defeated grandmaster Lee Sedol in a few rounds of Go,<sup>51</sup> a game that is traditionally known to be extremely difficult for AI to master due to the sheer number of possibilities that can occur in the game.<sup>52</sup> AlphaGo’s victory has been made possible through advancements in AI research, such as the development of ‘deep learning’. However, before delving further into deep-learning or similar topics, it is

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<sup>49</sup> A.I. ARTIFICIAL INTELLIGENCE (WARNER BROS., 2001). See also *A.I. Artificial Intelligence (2001)*, IMDB, <http://www.imdb.com/title/tt0212720/> (last visited June 19, 2016).

<sup>50</sup> See *Artificial intelligence*, OXFORD DICTIONARIES, <http://www.oxforddictionaries.com/definition/english/artificial-intelligence?q=artificial+intelligence> (last visited Jul. 10, 2016).

<sup>51</sup> Steven Borowiec, *AlphaGo seals 4-1 victory over Go grandmaster Lee Sedol*, THE GUARDIAN, Mar. 15, 2016, <https://www.theguardian.com/technology/2016/mar/15/googles-alphago-seals-4-1-victory-over-grandmaster-lee-sedol> (last visited Jul. 10, 2016).

<sup>52</sup> Alan Levinovitz, *The Mystery of Go, The Ancient Game that Computers Still Can’t Win*, WIRED: BUSINESS, Dec. 5, 2014, <http://www.wired.com/2014/05/the-world-of-computer-go/> (last visited June 19, 2016).

first important to understand the theoretical and scientific fundamentals of AI that are applicable to CGC software, before progressing on to deep learning's application on the same.

#### **4.1.1 Fundamentals of AI**

The notion of using machines to replace human effort and the impact of such was first discussed in the early 19<sup>th</sup> century, during the time of the industrial revolution. Thomas Carlyle, in his essay "Sign of the Times", spoke of the 19<sup>th</sup> century as the "Age of Machines", which noted man's interaction with machines and the consequences thereof during the Victorian Era. The idea of machines taking over man still exists at the present day, although the modern day person would interpret 'machine' very differently as compared to a person living in the Victorian Era. The machine that we speak of is that of AI, which has its roots back in the earlier part of the 20<sup>th</sup> century. Mathematicians such as Alan Turing, in his lecture delivered in 1947 to the London Mathematical Society, had spoken about the designing of the "automatic computing engine",<sup>53</sup> and also noted that the computer requires much greater memory storage space in order to be "persuaded to show any sort of genuine intelligence".<sup>54</sup> Development of more powerful computers in the later part of the 20<sup>th</sup> century and the 21<sup>st</sup> century has enabled researchers to build AI systems, as envisioned by Turing.

##### 4.1.1.1 Predictability of the AI system

In the modern context, an AI system essentially involves using software to think intelligently in the same manner as a human and to perform these intelligent human functions. From a layman's perspective, AI systems work by "assessing, inferring, and

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<sup>53</sup> Alan Turing, Lecture to the London Mathematical Society on 20 February 1947.

<sup>54</sup> *Id.*

predicting”<sup>55</sup> based on the data that is provided to them. The AI system assesses information that is fed into it, and subsequently makes inferences based on the data it has received by attempting to make connections and relationships amongst the different data that it receives. Upon making the relevant inferences, the AI system will then attempt to predict outcomes. How this works in practice is best seen through social networking platforms that suggest to the user new ‘pages’ or ‘products’ to like. For instance, the AI system would assess the ‘likes’ that the user has chosen, e.g. music bands such as Rammstein, Linkin Park and Metallica. Based on this information, the AI system can infer that the user has a preference for the heavy metal genre, and therefore predicts that the user might enjoy bands that fall within the same genre. The AI system will then suggest to the user other heavy metal music bands that it predicts that the user might like. The accuracy of the AI system’s prediction is one critical aspect in this field. The AI system will not be useful if its predictions have a low accuracy or hit rate. In this case, building an AI system that would be able to learn from its environment and data around it is essential in the growth and development of the AI system. Using the same example of heavy metal bands, assume now that there are instead two users: User *A* and User *B*, both of whom are fans of heavy metal bands. User *A* lists Rammstein, Linkin Park and Metallica, whereas User *B* lists Rammstein, Linkin Park, Metallica and Black Sabbath. The AI system achieves another degree of sophistication when it is able to take the data set from another area – User *B* in this case – and use the patterns that it has inferred from User *B* to predict User *A*’s preferences. Thus, the AI system would be able to predict that User *A* might enjoy Black Sabbath as well, as per its inference from User *B*. The AI system becomes much more complicated when there are numerous users involved, perhaps in the millions. The AI system must be able to process all the data

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<sup>55</sup> KRISTIAN HAMMOND, PRACTICAL ARTIFICIAL INTELLIGENCE FOR DUMMIES 18 (1st ed. 2015).

available in the environment and make inferences and predictions therefrom. Based on this, there are some important elements that should be further noted. Firstly, an AI system needs a defined space or an environment to work within. There must be a boundary for the AI system to operate within, as it needs to know *where* and *which* data should be collected. Next, the AI system cannot be constructed in vacuum: there must be a goal, a question, or a problem that the AI system targets to solve.<sup>56</sup> Even if the AI system does not receive a specific closed question (i.e. what is the likelihood of User *A* enjoying Black Sabbath’s music), there must be a goal in mind for the AI system (i.e. what are the possible heavy metal bands that User *A* might like). Lastly, the AI system’s ability to predict is contingent upon its ability to infer, which is in turn dependent on the data that is fed to the AI system for it to assess. One basic principle when using statistics to make predictions falls on the sample size – predictions are generally more accurate when there is a larger sample size in which the test is performed with. The same concept applies to AI systems as well – the larger the set of data, the more accurate AI systems can be.

#### 4.1.1.2 Knowledge representation

One other critical component of the intersection between AI and contract drafting is that of knowledge representation within AI systems. In earlier AI and law projects such as the Civil Code Legal Information Processing System (“CCLIPS”), the AI system was designed to “retrieve relevant cases and statutes from a highly integrated and efficient data base”.<sup>57</sup> In order for the CCLIPS to operate, the computer must have information and be able to understand the information provided to them. This is the field of knowledge

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<sup>56</sup> The importance in choosing the right data and the right amount of data for the purposes of training AI machines is best exemplified in the case where the US attempted to train AI systems to detect camouflaged enemy tanks. The end result was that the AI system detected the difference between cloudy days and sunny days instead of camouflaged tanks and empty forest – photographs provided to the AI system always depicted camouflaged tanks in cloudy days, and empty forests in sunny days. See Eliezer Yudkowsky, *Artificial Intelligence as a Positive and Negative Factor in Global Risk*, MACHINE INTELLIGENCE RESEARCH INSTITUTE, 15-16, <http://intelligence.org/files/AIPosNegFactor.pdf> (last visited Jul. 10, 2016).

<sup>57</sup> DEBESSONET, *supra* note 12.

representation, which “deals with the problem of representing knowledge for the computer”.<sup>58</sup> Knowledge representation involves creating a knowledge structure, in which the computer has a structured way of receiving the information. With this knowledge structure, the computer is then able to treat the data based on the knowledge structure accordingly.<sup>59</sup>

Moving from the CCLIPS to contract drafting, the problem of knowledge representation is just as prevalent when developing AI systems for contract drafting applications. There are several models of knowledge representation for contract drafting systems. One possibility could be that of a “computer-aided design, where the drafter uses basic blocks of text to construct a document...”.<sup>60</sup> This is seen more of an assembly of various blocks – where such blocks can be phrases, sentences or even whole clauses – rather than drafting per se. By assembling these blocks in a coherent manner, the AI system then “drafts” a contract that is intelligible. More recently, a group of researchers at Stanford University presented a paper entitled *Towards Machine-Understandable Contracts*,<sup>61</sup> which introduces a “novel approach for defining contract”,<sup>62</sup> which involves “formulating, analyzing and executing contracts more efficiently and effectively by having a high degree of automation.”<sup>63</sup> Each type of knowledge structure or approach has its advantages and limitations. Regardless of which structure, it suffices to say at this juncture that contract drafting AI systems must be able to deal with the chunks of data presented to it – names, terms, covenants, and more – and be able to assemble the data

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<sup>58</sup> *Id.* at 331.

<sup>59</sup> *Id.* at 332.

<sup>60</sup> DASKALOPULU, *supra* note 22, at 15.

<sup>61</sup> Sudhir Agarwal, Kevin Xu & John Moghtader, *Towards Machine-Understandable Contracts*, ARTIFICIAL INTELLIGENCE FOR JUSTICE, Aug. 30, 2016, [http://www.ai.rug.nl/~verheij/AI4J/papers/AI4J\\_paper\\_9\\_agarwal.pdf](http://www.ai.rug.nl/~verheij/AI4J/papers/AI4J_paper_9_agarwal.pdf).

<sup>62</sup> *Id.* at 1.

<sup>63</sup> *Id.*

received and perhaps even perform validity checks to ensure that the contract satisfies the necessary constraints (i.e. formalities or legal requirements).<sup>64</sup>

Needless to say, AI systems have to recognize and process natural language to draft contracts. Natural language processing is the field of study whereby computers are taught to understand and derive meaning from human languages. Much research has been done on natural language processing, which spans across other disciplines beyond contract drafting. The development of deep learning has also assisted in natural language processing research. Prior to deep learning, AI has received much skepticism. It has been noted that “AI became known for promising much more than it could deliver” during this period from the mid-20<sup>th</sup> century till the early 2010s. As seen from above, AI systems require huge amounts of data to be able to predict accurately, and in order to do so, it requires powerful processors in order to deal with the large amounts of data that is fed into its system, and to finally produce a suggestion or outcome. As computers became more powerful over the years, deep learning then became a possibility. *What then is deep learning?*

#### **4.1.2 Deep Learning**

One of the most notable recent developments in AI research is that of deep learning. Deep learning is a part of AI research or machine learning. Large tech companies such as Google and Facebook use deep learning for face recognition,<sup>65</sup> and competitive gaming.<sup>66</sup> This technology is also the engine behind AlphaGo and was responsible for its win against the Go grandmaster Lee Sedol earlier in 2016,<sup>67</sup> which sparked huge debates over

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<sup>64</sup> *Id.*

<sup>65</sup> Yaniv Taigman et al, *DeepFace: Closing the Gap to Human-Level Performance in Face Verification*, FACEBOOK: RESEARCH AT FACEBOOK, June 24, 2014, <https://research.facebook.com/publications/deepface-closing-the-gap-to-human-level-performance-in-face-verification/> (last visited June 19, 2016).

<sup>66</sup> See also BOROWIEC, *supra* note 51.

<sup>67</sup> *Id.*

the state of AI development, the future of AI, and how humanity should cope with technological developments.<sup>68</sup> An online course provider, Udacity, has also teamed up with Google to provide a course on this new alluring AI subject of deep learning.

On a more technical level, deep learning is an interesting area in the field of AI that is worth analyzing in relation to contract drafting. For simplicity, deep learning involves pumping large amounts of data through multiple layers of algorithms. Each layer is programmed to sieve a specific piece of data from the bigger group of data, and after each layer has detected the specific data, the system will merge all of these layers together to gain a macro and micro understanding of the data at hand. With large amounts of data, the AI system can learn by examples, and such learning by machines can occur in a few ways. One way is that of *supervised learning*, which is essentially a method “that can be used to train a system with the aid of a labelled set of examples”.<sup>69</sup> Facebook’s face recognition technology is a good example to illustrate this technology: once the user has ‘tagged’ or labelled his or her face multiple times, the AI system is trained to sieve out all similar faces based on the ‘tags’ as provided by the user.<sup>70</sup> By running bulks of data through the AI system, it can improve its accuracy in distilling the information that the user has tagged. Using the same Facebook example, the AI system, with now a greater amount of ‘tags’, should be able to provide more accurate ‘tagging’ suggestions on photos that have been uploaded by other users. Apart from supervised learning, there is also *unsupervised learning*, which involves running large amounts of data through the AI system, and letting the AI system detect trends and features based on the data provided.<sup>71</sup>

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<sup>68</sup> Patrick House, *AlphaGo, Lee Sedol, and the Reassuring Future of Humans and Machines*, THE NEW YORKER, Mar. 15, 2016, <http://www.newyorker.com/tech/elements/alphago-lee-sedol-and-the-reassuring-future-of-humans-and-machines> (last visited June 19, 2016).

<sup>69</sup> *From not working to neural networking*, THE ECONOMIST, *supra* note 1, at 5.

<sup>70</sup> For an example of Facebook’s deep-learning efforts, see Ahmad Abdulkader et al, *Introducing DeepText: Facebook’s text understanding machine*, FACEBOOK: FACEBOOK CODE, June 1, 2016, <https://code.facebook.com/posts/181565595577955/introducing-deeptext-facebook-s-text-understanding-engine/> (last visited Oct. 5, 2016).

<sup>71</sup> *From not working to neural networking*, THE ECONOMIST, *supra* note 1, at 6.

Deep learning has since become an immensely popular technology that has attracted much attention from companies and investors alike. The Economist in its special report on AI stated that “companies are lining up to supply shovels to participants in this AI gold rush”,<sup>72</sup> and such progress would “manifest itself as incremental improvements to internet services they already use every day.”<sup>73</sup> What is more pertinent in this case is whether AI technology and deep learning is applicable to the legal industry, and whether it can be the engine for contract generator systems, or CGC software in this case. This will be analyzed in the subsequent sections.

## ***4.2 AI & Contract Generators: An Analysis***

The main question in this section is as such: considering the aforementioned principles that are relevant for AI systems built to draft contracts, how possible is it for AI to generate or draft contracts? This is a difficult and delicate question. The previous sections provided the fundamentals for AI systems, which may be used in contract drafting systems. The goal of the subsequent sub-sections is then to analyze the potential limitations that underlie the system.

### **4.2.1 The Need for Targeted Outcomes**

It is important to bear in mind that there are many types of contracts drafted in numerous different languages that serve completely dissimilar goals. The AI system has to be targeted to achieve an outcome or reach a goal, and the more specific the question, the more effective AI is in answering that question. To put this into practice, consider the following questions:

1. Draft a contract.

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<sup>72</sup> *Id.* at 7.

<sup>73</sup> *Id.*

2. Draft a contract for the lease of a property.
3. Draft an arbitration clause for the lease of a property.
4. Draft an arbitration clause for a lease agreement specifying that the applicable arbitration rules shall be that of UNCITRAL, the seat of the arbitration shall be in New York, and that there shall be three arbitrators in the arbitral tribunal.

These questions above are ranked from being the least specific to the most specific. Let us assume that the AI system has been fed with data that contains all sorts of contracts – lease contracts, sale of property contracts, mortgage contracts, employment contracts amongst many others, and the AI system has been trained to distinguish each of these contracts. If the AI system receives a request asking it to ‘draft a contract’, it would try to predict which is the most relevant contract, and its output would be that of a contract that appears the most often in its data set. If it happens that mortgage contracts appear more frequently than any other type of contract, the AI system would suggest the mortgage contract to the user. This is generally not an issue if the user wants a mortgage contract, however, if the user intended for the AI system to produce a lease of property agreement, the AI’s prediction would be off the mark.

However, the AI system will be able to predict better what the user wants if the question given to the AI system were more specific. If the user asks the AI system to produce a contract for the lease of a property, the AI system would then sift through the data and suggest one such contract for the user. However, this does not mean that the contract is perfect: the *terms contained in the contract* may not necessarily be what the user wants exactly. For instance, the user may want a commercial lease contract; if the AI system were to pull up a residential lease contract instead, certain important clauses such as public liability insurance may not be present therein. The user must then manually add,

amend or remove the terms contained therein to reflect what he actually wants. However, with greater specificity, the user needs to do less editing and reviewing work. Should the user ask for an arbitration clause for the purposes of a lease agreement, the odds of the AI system producing an output that matches the user's need is higher as it sifts through all the contracts, in particular lease contracts, and suggests an arbitration clause. This may not yet be optimal for the user – arbitration clauses can vary greatly, as a drafter can dictate the number of arbitrators in the tribunal, the rules to be used, and the seat of arbitration. Now, using the last question in the list, an AI system is most likely to produce a more useful result by assessing the most relevant sentences and phrases occurring in the data set (i.e. “number of arbitrators”, “applicable rules”, “seat of arbitration”) and assembling them into a clause for the user. In this case, the odds of the user receiving exactly what he intends – a clause with specific details – is even greater.

This is however a very simple example in a highly contained environment. There are some issues that should be highlighted. Firstly, the level of sophistication of the AI system varies: to what degree is the AI system trained to detect data: entire contracts, paragraphs of clauses, sentences, phrases, or words? An AI system that cannot detect details to the level of sentences may not be able to come up with results that require piecing different sentences from a pool of data. Here, developments in not just AI and law research, but also natural language processing, play a huge role too. Furthermore, the greater the degree in detail in which the AI system is required to sift, detect and work with data, the more powerful a processor it needs, and likewise, the harder it is for the AI system to produce accurate results or predictions. Assume that an AI system is trained to detect individual words, and is required to produce a clause based on the words that it picks up – the AI system must not only know which words to pick out, but also to piece the words together to ensure proper grammar and syntax within the word.

Next, what is special about contracts is that a clause referring to the same issue can be expressed in a large variety of ways, depending on the style of the lawyers. For instance, an arbitration clause stating the number of arbitrators and the applicable rules can be drafted in several ways:

“Any dispute, controversy or claim arising out of or relating to this contract, or the breach, termination or invalidity thereof, shall be settled by arbitration in accordance with the [...] Rules. The number of arbitrators shall be ... [one or three]. The place of arbitration shall be ... [town and country].”<sup>74</sup>

“All disputes arising out of or in connection with the present contract shall be finally settled under the Rules of Arbitration of the [...] by one or more arbitrators appointed in accordance with the said Rules.”<sup>75</sup>

"All disputes or claims arising out of or in connection with this contract including disputes relating to its validity, breach, termination or nullity shall be finally settled under the Rules of Arbitration of the [...] by one or three arbitrators appointed in accordance with the said Rules."<sup>76</sup>

These clauses are not limited in content and can include more details such as the language of the arbitration, the applicable law in the arbitration, amongst others. As seen from above, there is no fixed way to express the same idea, and there is no hard and fast rule in drafting; often, it is based on the style of the drafter, or more importantly, the intended

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<sup>74</sup> This clause is a modified version of the UNCITRAL model arbitration clause. See U.N. Comm'n on Int'l Trade Law, UNCITRAL Arbitration Rules (as revised in 2010) (2011), 20, <https://www.uncitral.org/pdf/english/texts/arbitration/arb-rules-revised/arb-rules-revised-2010-e.pdf>.

<sup>75</sup> This clause is a modified version of the International Chamber of Commerce's model arbitration clause. See *Standard ICC Arbitration Clauses*, INT'L CHAMBER OF COMMERCE, <http://www.iccwbo.org/products-and-services/arbitration-and-adr/arbitration/standard-icc-arbitration-clauses/> (last visited Jul. 13, 2016).

<sup>76</sup> This clause is a modified version of the Vienna International Arbitral Centre's model arbitration clause. See *Model Clause*, VIENNA INT'L ARBITRAL CENTRE, <http://www.viac.eu/en/arbitration/model-clause> (last visited Jul. 13, 2016).

reader's preference. A lawyer drafting the same clause may have opposing views on how to present the clause as compared to an in-house counsel who has to approve the same contract. Eventually, developers can consider building advanced AI systems to detect the nuances of each user, and therefore accommodate to their personal preferences.

This also highlights the bigger issue with contract drafting: a clause that is preferred by most users may not necessarily be the best for another user – the AI system can be trained to select the clause that is most often used by users of that system, but does this mean that this clause is the most appropriate clause to use for the circumstances? In order to decide which is the most suitable clause, drafters and their clients have to consider other non-legal implications that could affect the manner in which the clause is to be presented; such considerations include the commercial risks involved in the transaction, the nature of the relations with the other party, and how material the clause is to the drafter/client/user. Besides these issues, there are further limitations in the use of AI itself that may hamper or limit the development of such an AI system to draft more complicated contracts, which will be subsequently analyzed in the next section.

#### **4.2.2 Other Limitations of AI**

As previously mentioned in Part 4.1.2, current AI technologies such as deep learning need to be fueled by large amounts of data, and their value add comes in being able to digest and classify this data accurately and relevantly for the job that they are tasked to do. This means that the AI's ability depends on the set of data that has been fed into it, and in the case of an AI system as the engine for a CGC software, the AI's ability to predict and draft contracts is determined by the contracts that have been fed into it. Taking the previous example of arbitration clauses as an example, an AI system that has been only fed with contracts that do not contain arbitration clauses will not be able to draft a

contract that has an arbitration clause simply because such data is non-existent. This harks back to a saying: you are what you eat, and in this case, the AI machine's capabilities are limited to what data it has 'eaten'.

Another concept that flows from this same topic is the fact that the AI system may not necessarily be able to provide up-to-date clauses on its own, unless an administrator continuously feeds the system with new clauses that have been recognized and allowed by the court, while removing non-enforceable clauses. In a closed environment where law is not expected to have changes, the AI system is protected from new data potentially affecting its predictions – however, as law continuously changes with society's progress, a practical AI system cannot be closed, and must be able to adapt to new cases. Thus, either a parallel software has to be developed to analyze new legislation and judgments and alert the AI system to changes by deleting outdated data and inserting new ones in the data pool, or a data analyst has to be hired to find and scan new data that is available and input it into the AI system in a format readable to the AI system.

All in all, the use of AI systems for contract drafting is an interesting idea and theoretically possible, but may be difficult to implement in practice at the present moment. Such AI systems that can draft advanced contracts will most likely cost much to build and develop, and may require an extensive beta testing with a large number of users before its predicted suggestions become relevant and useful. Software developers must also find large volumes of data relating to contracts to design such a system. The free template contracts that can be found online are not exhaustive of the types of contracts possible; more often than not, law firms keep their intellectual property such as standard form contracts safely guarded.

Despite such obstacles, it does not necessarily mean that contract drafting will not be possible with AI. Back in the mid to late 20<sup>th</sup> century, AI “became known for promising

much more than it could deliver”. However, with more powerful processors, this field has made much progress with deep learning, and much interest in the subject has been rekindled. Today, there are several projects and startups that are looking into harnessing AI to draft contracts. One of them is Legalese, which states that “software is eating law”<sup>77</sup> and comments that the “drafting of transactions starts to look a lot like writing code”.<sup>78</sup> At Stanford’s Centre for Legal Informatics (or more commonly known as CodeX), the Stanford Computable Contracts Initiative<sup>79</sup> is looking into developing computable contracts, thereby attempting to break the “conventional view (...) that the automation of contract creation, monitoring and compliance is beyond the capabilities of today’s technology”.<sup>80</sup> With such projects, the development of a CGC software may one day be a reality, although it may take some time before there will be a program to draft complex contracts.

#### **4.2.3 Other Non-AI possibilities for Computer Generated Contract Software**

After having considered the capabilities and limitations of AI and these implications on CGC software in the preceding paragraph, another aspect that software developers can explore is the use of other non-AI but technology driven ideas to solve contract drafting issues, such as compliance logic. The use of compliance logic in building contract drafting software has been raised by contractCode developer Joe Dewey,<sup>81</sup> and one such use of compliance logic is to detect unenforceable clauses. In his article, Dewey provides an example of a code drafting a promissory note – if the coder/drafter intends to add an interest rate higher than the maximum legally allowed rate, the software will raise an

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<sup>77</sup> LEGALESE, <http://www.legalese.io/> (last visited Jul. 8, 2016).

<sup>78</sup> *Id.*

<sup>79</sup> *Computable Contracts*, STAN. L. SCH., <http://compk.stanford.edu/> (last visited Jul. 8, 2016).

<sup>80</sup> *Stanford Computable Contracts Initiative*, STAN. L. SCH., <https://law.stanford.edu/projects/stanford-computable-contracts-initiative/> (last visited Jul. 8, 2016).

<sup>81</sup> DEWEY, *supra* note 44.

error to the coder/drafter.<sup>82</sup> The application of compliance logic is also useful in jurisdictions from both the common law and civil law tradition. For instance, compliance logic can be used to detect when a liquidated damages clause will be deemed as a penalty clause in the English courts and be struck down.<sup>83</sup> Furthermore, this tool can also be used to detect and prevent situations of *laesio enormis* under Austrian law,<sup>84</sup> i.e. when a contract is void because the consideration is less than 50% of the market value.<sup>85</sup> In this sense, software developers attempting to make inroads into the contract drafting industry can consider using these non-AI alternatives, which are nonetheless still useful applications that can notify users of the potential pitfalls in their contracts.

### ***4.3 Smart Contracts & Blockchain Technology***

Lastly, one hot topic involving the intersection of technology and contracts is that of “smart contracts”. Smart contracts are built from blockchain technology, and are essentially “a piece of computer code that is capable of monitoring, executing and enforcing an agreement”.<sup>86</sup> Blockchain technology, in simpler terms, is a “data structure that makes it possible to create a digital ledger of transactions and share it among a distributed network of computers (...) [and] uses cryptography to allow each participant on the network to manipulate the ledger in a secure way without the need for a central authority”. Smart contracts are thus pieces of code that are “stored and replicated on a

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<sup>82</sup> *Id.*

<sup>83</sup> Under English law, the Court may treat a clause as a penalty clause and thus strike it down, thereby rendering it unenforceable. See *Dunlop Pneumatic Tyre Co Ltd v. New Garage & Motor Co Ltd* [1914] U.K.H.L. 1.

<sup>84</sup> ALLGEMEINES BÜRGERLICHES GESETZBUCH [ABGB] [CIVIL CODE] § 934, <https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=10001622> (Austria) [hereinafter *ABGB*].

<sup>85</sup> *Id.*

<sup>86</sup> *A smart new world: blockchain and smart contracts*, FRESHFIELDS BRUCKHAUS DERINGER, [http://www.freshfields.com/en/global/digital/blockchain\\_and\\_smart\\_contracts/?LangType=2057](http://www.freshfields.com/en/global/digital/blockchain_and_smart_contracts/?LangType=2057) (last visited Jul. 10, 2016). See also Dean Walsh, *A Beginner’s Guide to Smart Contracts*, CRYPTORIALS, Mar. 10, 2015, <http://cryptorials.io/a-beginners-guide-to-smart-contracts/> (last visited Jul. 10, 2016). Companies have also offered smart contract solutions; see SMARTCONTRACT, <https://smartcontract.com/> (last visited June 5, 2016).

distributed storage platform”,<sup>87</sup> “executed/run by a network of computers”,<sup>88</sup> and “can result in ledger updates”<sup>89</sup>, the features of which are derived from blockchain technology. With the advent of smart contracts, one interesting question would be whether drafting should now also be considered as drafting for computers to understand and executed instead of human, i.e. drafting in the form of code rather than in the traditional form of complete sentences. This is an interesting consideration if there is a trend of more users turn to smart contracting instead of traditional contracting. While smart contracting currently deals with the execution or performance of contracts, one should consider whether lawyers are necessary if contracts are to be written like code instead of prose, so as to enable it to be easily enforced as a smart contract. If this is the trend, AI systems should be taught to produce contracts in the form of code rather than replicating contracts in traditional prose. However, considering that drafting contracts in the form of code are still an exception rather than a norm presently, much is therefore still open for discussion in this area.

In any case, the fusion of CGC software and smart contracts can be an interesting application: on top of building and designing a contract, the same software can by itself monitor, execute and enforce the same contract as well. Such blending of controls and functions of two different software into one suite of services can provide interesting solutions for businesses and consumers, and is worth some thought; this is however not within the scope of this thesis. Regardless, in order to provide a more holistic evaluation of the impact of such software on consumers or lawyers, one other aspect must be taken into account: the legal issues arising from the use of such CGC software. This will be explored in the next section.

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<sup>87</sup> Antony Lewis, *A gentle introduction to smart contracts*, THOUGHTS ON BLOCKCHAIN TECHNOLOGY, <https://bitsonblocks.net/2016/02/01/a-gentle-introduction-to-smart-contracts/> (last visited Jul. 10, 2016).

<sup>88</sup> *Id.*

<sup>89</sup> *Id.*

## **5 Legal Conundrums Arising from the Use of Computer Generated Contracts and Computer Generated Contract Software**

The use of contract generators to create CG contracts may help businesses save time and monetary costs, but the use of such software does not come without problems. Apart from technical feasibilities, which have been earlier discussed in Part 4, there are several legal issues that can arise due to the use of CGC software. The legal problems can be categorized into two main sections: (1) legal issues arising from the use of CG contracts; and (2) legal issues arising from the use of CGC software. As this paper intends to provide a comparative study and analysis of the legal issues based on US, UK and Austrian law, it is pertinent to provide a background on the different legal systems and the general contract law principles in each jurisdiction before delving into the key legal issues.

### ***5.1 A Background on the US, UK and Austrian Legal Systems***

#### **5.1.1 The Common Law Tradition & the Civil Law Tradition**

Whether a contract is valid and binding under the law is first and foremost dependent on the applicable law to the contract. While each country has its own laws, most countries fall into one of these categories of systems of law: the common law tradition, the civil law tradition, or Sharia law. As the paper intends to do a comparative legal study based on US, UK and Austrian laws, it will elaborate on the common law tradition and civil law tradition only since the US and UK fall under the common law tradition, whereas Austria falls under the civil law tradition.

The common law tradition and the civil law tradition have different approaches when creating, understanding and interpreting the law. Firstly, the role of a judge vis-à-vis an academic differs greatly in both systems. Judges in the common law tradition can create law, whereas judges in the civil law tradition are “mouthpieces of the law”.<sup>90</sup> The importance of the judge is further highlighted by the nuances within the legal system itself; the common law tradition recognizes the binding quality of judgments from higher courts (i.e. the doctrine of stare decisis), unlike the civil law tradition, where “judges cannot make law”.<sup>91</sup> Furthermore, the common law tradition and civil law tradition differ in terms of the way remedies are operated. The existence of the common law and equity within the common law tradition, as opposed to a unified body of law in the civil law tradition makes the granting of remedies under the common law tradition more complex, especially when a plaintiff intends to seek equitable remedies such as an injunction.

Lastly, both traditions have different approaches when it comes to dealing with rights and obligations arising from contractual liability or tortious acts. The common law tradition traditionally differentiates contractual and tortious liability, whereas the civil law tradition deals with both under one topic, under that of the law of obligations. These differences, i.e. the binding quality of judgments, the existence of equity, and the differences in the law of contract vis-à-vis the law of obligations, will be further explored in the subsequent sections as they serve as a base for understanding the subsequent legal issues to be discussed.

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<sup>90</sup> This quote has often been attributed to Montesquieu. See generally MONTESQUIEU, THE SPIRIT OF THE LAWS 221-237 (Thomas Nugent trans., J. Nourse 1777); copies of this translation have been published online, which are available at *Modern History Sourcebook: Montesquieu: The Spirit of the Laws, 1748*, FORDHAM UNIVERSITY, <http://sourcebooks.fordham.edu/Mod/montesquieu-spirit.asp> (last visited Oct. 10, 2016).

<sup>91</sup> JOHN HENRY MERRYMAN & ROGELIO PÉREZ-PERDOMO, THE CIVIL LAW TRADITION 38 (3rd ed. 2007).

#### 5.1.1.1 The binding quality of judgments

One aspect of the common law tradition is the binding quality of judgments, and this is also known as 'stare decisis'. Stare decisis is the notion that judgments from the higher courts are binding on the lower courts;<sup>92</sup> for instance, decisions made by the highest court in England, the Supreme Court of the United Kingdom (previously known as the House of Lords), are binding on lower courts such as the Court of Appeal. Under the stare decisis principle, only ratio decidendi (the issue(s) in the case that the court must decide) on are binding; obiter (ancillary comments in the judgment that do not touch on the issue of concern) are not. However, the civil law tradition does not apply stare decisis, and the cases decided by judges are not binding on lower courts, although they may remain influential in how the law should be interpreted.

#### 5.1.1.2 The distinction between common law and equity

Within the common law tradition exists two different bodies of law, namely the common law and equity. In order to prevent confusion on the terminology, 'common law tradition' refers to the legal system of the US and UK as opposed to the civil law system of Austria, while 'common law' refers to the body of law as distinguished from equity, which is another body of law that co-exists within the same common law tradition. Historically, equity was developed to mitigate and alleviate parties from the harshness of the common law. For instance, under English contract law, the only relief that a party may seek under the common law is that of damages – other reliefs such as injunctions and specific performance are equitable reliefs. Normally, a person is entitled to either the common law relief so long as he shows proof that the other party has breached his obligations in the contract. In the past, common law and equity used to be two separate bodies of law

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<sup>92</sup> *Stare decisis*, CORNELL UNIVERSITY L. SCH.: LEGAL INFORMATION INSTITUTE, [https://www.law.cornell.edu/wex/stare\\_decisis](https://www.law.cornell.edu/wex/stare_decisis) (last visited Jul. 10, 2016).

administered by two different courts; i.e. the normal courts for common law, and equity by the Court of Chancery.<sup>93</sup> Both bodies of law were eventually merged and administered by the same courts concurrently;<sup>94</sup> however, both bodies of law remain distinct and still exist as two separate bodies of law as of today.

If a party decides to pray for an equitable relief of specific performance instead of damages, the court may refuse to grant this prayer even if the party so praying has satisfied all the requisite legal elements for a specific performance. The operation of equity is not only dependent on satisfying the legal elements, but also the conduct of the party – i.e., not all who seek equity may receive equity. If the court finds that the party seeking equitable relief has acted unconscionably, it may not allow such relief to be granted to the party. There are several equitable maxims that can affect and influence the court's deliberation on granting of an equitable relief. Some common maxims include "he who seeks equity must do equity"<sup>95</sup> and "he who comes into equity must come with clean hands",<sup>96</sup> amongst others. Yet, it is worth noting that some academics have commented on the apparent arbitrary quality of some equitable maxims, e.g. in the case of the maxim "he who seeks equity must do equity", "the possibility of inconsistencies and unreasoned decisions is the danger of reliance upon this maxim for the conclusion that the defendant must "do" whatever the judge considers to be "equity".<sup>97</sup>

Regardless, parties seeking equitable reliefs have more obstacles to clear before being successfully granted such relief – apart from showing that he or she has satisfied all elements in asking for such a relief, he or she must not have conduct that would lead to the operation of any equitable maxim against his favor. In this respect, there are usually

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<sup>93</sup> SNELL'S EQUITY 12 (John McGhee ed. 32nd ed. 2010) [1-016] [hereinafter *Snell's Equity*]; KONRAD ZWEIGERT & HEIN KÖTZ, EINFÜHRUNG IN DIE RECHTSVERGLEICHUNG 196 (3rd ed. 1996).

<sup>94</sup> SNELLS EQUITY, *id.*

<sup>95</sup> *Id.* at 110 [5-009].

<sup>96</sup> *Id.* at 112 [5-015].

<sup>97</sup> *Id.* at 110 [5-009].

other considerations when one chooses to use an equitable defense or relief as compared to common law. This distinction between common law and equity is thus important for practitioners in common law jurisdictions as the facts of the case and conduct of their clients would affect the type of relief that their clients may receive from the courts. Equity, however, is a construct present in the common law tradition and the civil law tradition does not have a corresponding concept. There is no distinction between a common law relief and an equitable relief in the civil law tradition. In the same example of an injunction, the courts will grant it so long as the necessary elements to be successful in an injunction application are fulfilled as per the respective articles in the relevant Austrian code.<sup>98</sup>

#### 5.1.1.3 The law of obligations vis-à-vis the law of contracts

The differences between the common law tradition and the civil law tradition are made more apparent by the fact that the civil law tradition does not have ‘contract law’ in the same way that common law lawyers understand. The civil law tradition has a larger body of law called the ‘law of obligations’ (*Schuldrecht*), which governs obligations between parties including contracts (*Vertrag*), torts (*Delikt*), family partnerships (*Eherecht*), and inheritance (*Erbrecht*).<sup>99</sup> Apart from specific rules such as those that govern e-commerce contracts or consumer protection, the majority of the obligations are regulated by the Austrian Civil Code (*Allgemeines Bürgerliches Gesetzbuch*) (“ABGB”).<sup>100</sup> What the American and English lawyers know as ‘contract law’ is thus governed by the bigger umbrella topic of the ‘law of obligations’ in the Austrian legal system.

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<sup>98</sup> GESETZ VOM 27. MAI 1896, ÜBER DAS EXEKUTIONS- UND SICHERUNGSVERFAHREN [EXEKUTIONSORDNUNG – EO] [ENFORCEMENT REGULATIONS] REICHSGESETZBLATT [RGLB] No. 79/1896, as amended, § 397, <http://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=10001700> (Austria).

<sup>99</sup> STEFAN PERNER, MARTIN SPITZER & GEORG KODEK, BÜRGERLICHES RECHT 5 (4th ed. 2014).

<sup>100</sup> ABGB, *supra* note 84.

This key differences between the law of obligations, contract law and tort law are important when analyzing the proper formation, enforceability or interpretation of contracts. Under the common law, contract law and tort law are two different branches of law that deals with the duties that different parties owe to each other. Traditionally, contract law deals with duties imposed on parties that arise as a result of the contract, whereas tort law deals with duties that arise by virtue of the law (i.e. no contract is needed to establish the duty between one party to another).<sup>101</sup> Should there be a contractual relationship, the terms under the contract will govern the rights of the parties, unless the contract is unenforceable or void. Whereas for the civil law tradition, the law of obligations governs relationships that arise due to the duties owed by each party to another, either through the occurrence of an event (thereby resulting in tortious duties) or through contract.<sup>102</sup> In this case, different articles in the ABGB will apply depending on whether a contract exists or not. Should there be a contract, only the corresponding articles on contractual obligations will apply to the parties at hand, failing which, articles relating to relationships arising from non-contractual obligations will apply.<sup>103</sup> Unless there are other statutes that govern specific tortious or contractual relationships, such as product liability codes (which will be later discussed at Parts 5.3.1.2-5.3.1.4), any form of obligation or duty between parties are generally dealt with under the ABGB.

Next, under the common law tradition, applicable common law and equitable rules governing the formation, enforceability or interpretation of contracts are mostly derived from case law, save for a few statutes codifying certain rules, such as the Contract Rights of Third Parties Act and the Misrepresentation Act, amongst others. This also means that courts have the flexibility and power to amend or create new laws, depending on the

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<sup>101</sup> However, many academics have been unable to provide a precise definition of tort. See generally VIVIENNE HARPWOOD, *MODERN TORT LAW* 1-4 (6th ed. 2005).

<sup>102</sup> This is also known as *Schuldrecht*.

<sup>103</sup> PERNER, SPITZER & KODEK, *supra* note 99, at 151.

circumstances and cases before them. However, in the case of the civil law tradition, courts have a relatively fixed framework (i.e. the ABGB or other relevant codes (*Gesetz*)) to work within, and must attempt to interpret new situations within existing codes, until legislature amends the existing codes or implements new ones.

Regardless, this distinction in classification will not have a huge bearing in the subsequent analysis of the legal issues, although appreciation of this distinction will be useful in several aspects, such as in understanding how laws and regulations governing the enforceability and formation of contracts are effected, and being cognizant as to how or whether these laws and regulations should be amended in the US, UK and Austria. The legal systems of these three countries will be further elaborated in the following sections.

### **5.1.2 The US Legal System**

The US legal system follows the common law tradition and operates on two levels, namely, the federal and state level. It draws its sources of law from three main areas, i.e. that of the constitution, statutes, and the common law and equity.<sup>104</sup> There are some notable features of the US legal system that should be highlighted for the purposes of this thesis: (1) the distinction between federal law and state law; and (2) the operation of contract law in the American legal system.

#### 5.1.2.1 Federal law and state law

In essence, federal law applies to the entire country, whereas state laws are only applicable within the state. Pursuant to the US Constitution, federal laws made under the Supremacy Clause in the US Constitution are the supreme law of the US;<sup>105</sup> thus, in the

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<sup>104</sup> GREGORY KLASS, CONTRACT LAW IN THE USA 25, (1st ed. 2010).

<sup>105</sup> U.S. CONST. art. VI.

event of conflict of laws between federal and state laws, federal law will prevail. The distinction between federal law and state law raises several questions, and becomes relevant when dealing with federal and state legislation relating to consumer protection, or when discussing whether any suggested regulations in the legal industry should be introduced at the federal or state level. However, not all laws are regulated at the federal level. Some laws, such as the regulation of the admission of lawyers, are done at the state level. This discrepancy in laws amongst states with regard to the legal profession can prove to be difficult for the mobility of lawyers, which is an important topic later at Part 5.3.3.2. At this juncture, it suffices to note that the US has federal-state laws, and the introduction of laws on either federal or state level has different consequences.

#### 5.1.2.2 US contract law

US contract law is largely left to state regulation, and since this is so, ‘US contract law’ is a misnomer in itself; rather, each state has its own set of laws and regulations governing contract law – there are New York contract laws, Californian contract laws, and Louisianan contract laws – all of which differ from each other to a certain extent. To further complicate matters, Louisianan contract law is based on the French civil code,<sup>106</sup> which is derived from the French civil law tradition, whereas New York contract law is premised on the English common law tradition.<sup>107</sup> This means that state distinctions matter where contract law is concerned, although books dealing with US contract law refer to the general principles of contract law under the common law tradition, and deal with the

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<sup>106</sup> See A.N. Yiannopoulos, *The Civil Codes of Louisiana*, 1 CIVIL L. COMMENTARIES 1 (2008), [http://www.law.tulane.edu/uploadedFiles/Institutes\\_and\\_Centers/Eason\\_Weinmann/v01i01-Yiannopoulos\(1\).pdf](http://www.law.tulane.edu/uploadedFiles/Institutes_and_Centers/Eason_Weinmann/v01i01-Yiannopoulos(1).pdf).

<sup>107</sup> Michael W. Galligan, *Choosing New York Law as Governing Law for International Commercial Transactions*, N.Y. STATE BAR ASS’N 4 (Oct. 8, 2012), [http://www.nyiacc.org/nyiac-core/wp-content/uploads/2013/04/NY\\_Law\\_as\\_Governing\\_Law1.pdf](http://www.nyiacc.org/nyiac-core/wp-content/uploads/2013/04/NY_Law_as_Governing_Law1.pdf).

subject holistically,<sup>108</sup> while recognizing and pointing out state distinctions for certain situations.

There is however some homogeneity for certain aspects of contract law. The Uniform Commercial Code (“UCC”), which involves transactions relating to the sales of goods, has been widely adopted across states. Therefore, the UCC will apply contracts for the sale of goods, which consequently means that the formation or enforceability of a sale of goods contract is dependent on the case law interpreting the UCC. The differences between contracts interpreted under the UCC and the common law become evident in cases when one party seeks to enforce a contract, or attempt to have the contract voidable or void.<sup>109</sup> Thus, one other way to categorize US contract law is through these two broad categories: (1) US contract law as derived from the principles of common law and equity; and (2) US contract law as determined by the provisions of the UCC. The categorization of US contract law in the aforementioned manner will be useful in the later analysis on using CGC software to create contracts that conform to the laws of the land, which will be discussed at Part 5.3.4.1.

### **5.1.3 The UK Legal System**

The UK legal system is based on the common law tradition and is the forerunner of the legal system that the US operates on. The UK is made up of several states, such as England, Wales, Scotland and Northern Ireland, amongst others, and each state may or may not have similar laws. To this end, the UK legal system generally refers to the law of England and Wales, and English law likewise refers to the same. Insofar where the law of contracts is concerned, English case law forms the basis of many principles and rules of the law of contracts, such as the offer and acceptance mechanism, the requirement of

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<sup>108</sup> KLASS, *supra* note 104.

<sup>109</sup> KLASS, *supra* note 104, at 31.

consideration, and the doctrines of mistake and frustration.<sup>110</sup> Apart from case law, the UK parliament has also enacted several statutes to govern specific situations that occur in contract law, e.g. situations governing misrepresentation<sup>111</sup> and privity of contracts.<sup>112</sup>

With regard to other subjects of law, the same system applies – the principles and laws that govern other areas such as consumer protection, regulation of legal service providers, are derived from either statutes or cases, since judgments are binding. As the legislature enacts statutes, the courts interpret them, and their decision on how sections in the statutes should be interpreted are binding as well. Although the UK legal system does not have federal law or state law unlike the US, some aspects of the UK legal system are still subject to EU law,<sup>113</sup> and the UK must harmonize its laws to be congruent with the regulations and directives as enacted by the EU.<sup>114</sup> Otherwise, the UK legal system shares certain similarities with the US legal system, such as that of *stare decisis*, whereby decisions from the Supreme Court of the UK (or previously, the House of Lords) are binding on all lower courts unless these decisions have been overturned by the same court itself. Equity is also highly prevalent in the UK legal system, and is the basis of several core contract law principles, such as that of promissory estoppel<sup>115</sup> and undue influence.<sup>116</sup>

The applicability of EU law for the UK is however uncertain due to the results of the United Kingdom European Union Membership Referendum (or also more famously known as “Brexit”), in which the UK has voted by a majority of 52% to 48% to leave the

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<sup>110</sup> See generally EDWIN PEEL, *TREITEL ON THE LAW OF CONTRACT* (14th ed. 2015) [hereinafter *Treitel*]; CHITTY ON CONTRACTS: VOLUME 1 GENERAL PRINCIPLES (H.G. Beale et al. eds., 32nd ed. 2015) [hereinafter *Chitty on Contracts*].

<sup>111</sup> Misrepresentation Act, 1967, c. 7 (U.K.).

<sup>112</sup> Contracts (Rights of Third Parties) Act, 1999, c. 31 (U.K.).

<sup>113</sup> See Consolidated Version of the Treaty on the Functioning of the European Union arts. 2 & 288, Oct. 26, 2012, 2012 O.J. (C 326) 47 [hereinafter *TFEU*].

<sup>114</sup> *Id.* at art. 288.

<sup>115</sup> CHITTY ON CONTRACTS, *supra* note 110, at 458 [4-086].

<sup>116</sup> *Id.* at 782 [8-057].

EU.<sup>117</sup> Since the results were released on 24 June 2016,<sup>118</sup> much speculation has been made as to the next few steps the UK would take to sever or retain all or part of its ties with the EU,<sup>119</sup> and it is debatable as to whether the UK would invoke Article 50 of the Treaty on the Functioning of the European Union (“TFEU”) and leave the EU, or leave the EU but remain in the single market as a member of the EEA, or remain as a member of the EU. Each of these options, save for the last, will affect the applicability of EU law in the UK legal system. At the time of the submission of this thesis, the UK remains a full member of the EU; however, considering the uncertainty surrounding the UK’s decision in leaving the EU and the terms of its departure from the EU, it should be noted that the analysis provided in the subsequent sections may be different or even irrelevant due to the UK and EU’s negotiations on this matter.

#### 5.1.4 The Austrian Legal System

The Austrian legal system is founded on the civil law tradition, unlike the US and the UK. Apart from the differences between the common law tradition and civil law traditions as mentioned in Part 5.1.1, Austrian law has other notable characteristics that are worth mentioning. Firstly, Austria has a federal-state system, and correspondingly, certain areas of law are enacted on the federal level (*Bundesrecht*), whereas others are enacted on the state level (*Landesrecht*), and such powers are granted by virtue of the Austrian Constitution.<sup>120</sup> For example, laws relating to the regulation and representation of lawyers

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<sup>117</sup> Brian Wheeler & Alex Hunt, *The UK’s EU Referendum: All you need to know*, BBC NEWS (Oct. 2, 2016), <http://www.bbc.com/news/uk-politics-32810887> (last visited Oct. 6, 2016).

<sup>118</sup> GOV.UK, *supra* note 5.

<sup>119</sup> As of the submission of this thesis, the UK has not triggered any formal proceeding to leave the EU. There has been no concrete plan on this matter since Brexit happened. See also Simon Nixon, *The EU has no Brexit Plan Either*, THE WALL STREET JOURNAL (Jul. 6, 2016), <http://www.wsj.com/articles/the-eu-has-no-brex-it-plan-either-1467837042>.

<sup>120</sup> BUNDES-VERFASSUNGSGESETZ [B-VG] [FEDERAL CONSTITUTIONAL LAW] BUNDESGESETZBLATT [BGBl] No. 1/1930, as amended, Articles 10-15, [https://www.ris.bka.gv.at/Dokumente/ErV/ERV\\_1930\\_1/ERV\\_1930\\_1.pdf](https://www.ris.bka.gv.at/Dokumente/ErV/ERV_1930_1/ERV_1930_1.pdf) (Austria).

are effected by the state,<sup>121</sup> although each individual state has its own professional association of lawyers (*Rechtsanwaltskammer*), which are in charge of the affairs of attorneys registered under its local bar. Another example on state enacted laws are the payment of taxes relating to the use of sewage facilities (*Kanalgebühr*),<sup>122</sup> whereby each state has its own set of laws. However, other areas of law such as that of the law of obligations fall under federal law, i.e. the ABGB is a federal code that applies to all states. Besides this, one other characteristic of Austrian law is the influence of EU law on Austrian national law. Since Austria is a member state of the EU, it is subject to EU law, similar to the UK as of now. Therefore, Austria and the UK are subject to the same EU laws and are expected to comply with EU regulations and directives, even if they are from different legal traditions. In light of this, an understanding of the operation of EU laws is thus important in establishing how and which EU laws apply.

### 5.1.5 Applicability of European Union Law

Both the UK and Austria are, as of the submission of this thesis, members of the EU, and as part of their ongoing obligations as members of the EU, the UK and Austria are required to harmonize and implement laws in their legal system as directed by the EU via EU regulations (*Verordnungen*), directives (*Richtlinien*) and applicable decisions (*Beschlüssen*).<sup>123</sup> However, the EU can only harmonize laws that are within its competence, and consequently, not all laws are harmonized across the EU, with some

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<sup>121</sup> RECHTSANWALTSORDNUNG [RAO] [Act on Attorneys] Reichsgesetzblatt [RGBL] No. 96/1868, as amended, <https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=10001673> (Austria) [hereinafter *RAO*].

<sup>122</sup> Each province has a different method in calculating such taxes. See GESETZ VOM 25. JUNI 1984 ÜBER DIE EINHEBUNG VON KANALABGABEN [KABG] LANDESGESETZBLATT [LGBL] No. 41/1984, as amended, §5, <https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=LrBgl&Gesetzesnummer=10000169> (Austria) and GESETZ VOM 12. JULI 1959, WOMIT DIE GEMEINDEN ZUR ERHEBUNG BESTIMMTER INTERESSENBEITRÄGE VON GRUNDSTÜCKSEIGENTÜMERN UND ANRAINERN ERMÄCHTIGT WERDEN [INTERESSENTENBEITRÄGE-GESETZ 1958] LANDESGESETZBLATT [LGBL] No. 28/195, as amended, § 1, <https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=LROO&Gesetzesnummer=10000040> (Austria); Burgenland specifies a formula to calculate such taxes, whereas Upper Austria allows the province's municipalities to decide on how such taxes should be calculated.

<sup>123</sup> TFEU, *supra* note 113, at art. 288.

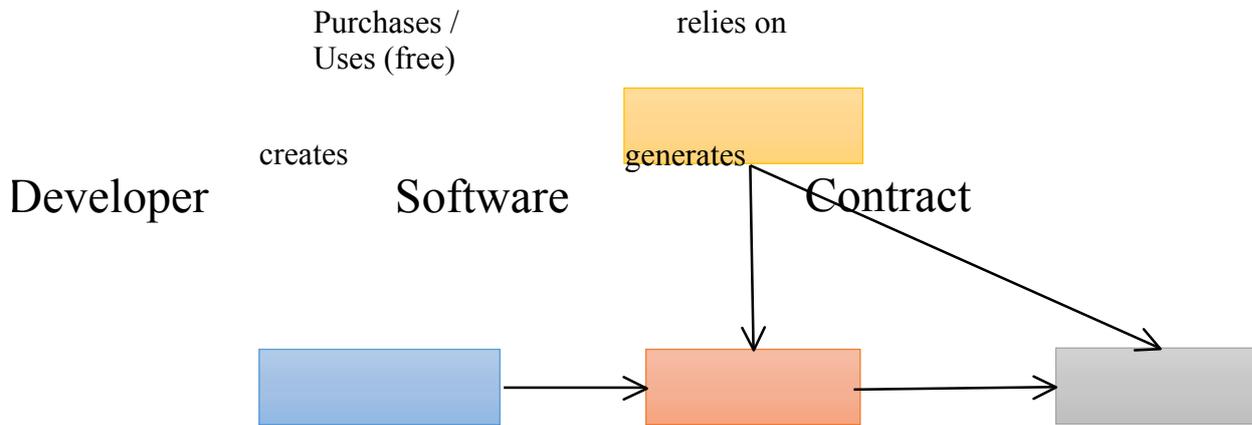
laws being only partially harmonized. In this regard, due attention should be paid on whether there are any applicable EU regulations or directives that have been implemented or may be implemented in the near future. Thus, this paper and analyze will discuss the legal issues arising from the use of CG contracts and CGC software in light of EU laws, i.e. which EU regulations or directives apply, and whether EU law should be used to harmonize certain areas of law. Having provided a brief overview of the different legal systems and the relevance of EU law, the next step would be to delve into the legal issues arising from the reliance on CG contracts and the use of CGC software.

## ***5.2 Legal Issues Arising from the Reliance on Computer Generated***

### ***Contracts***

The use of CG contracts by businesses or individuals may result in ramifications to the general principles of contract law or the law of obligations. This is due to the change in the traditional model of contract drafting (i.e. where individuals and businesses are represented by their lawyers), as compared to that of a relationship between the consumer and the software whereby the individual or business has taken on the role of a consumer. Lawyers are thus removed from the equation. Where the lawyer uses the software as part of his business, the analysis will differ, and this will be discussed later at Part 5.4. For now, the relationship between consumer and software (where the consumer is an individual or business) is best illustrated with the following diagram:

# Consumer



Based on the chart as illustrated previously, there are several legal issues that can arise when consumers purchase or use CGC software, and rely on the CG contract. The legal issues can be distilled into two key categories. The first category relates to how CG contracts alter traditional principles of contract law when consumers generate contracts from the CGC software. The second category deals with legal issues arising from the use of CGC software, such as that of product liability, or whether CGC software should be regulated as a legal service provider, similar to lawyers. The legal issues arising from the reliance on CG contracts will be discussed in the subsequent sub-sections, while the legal issues arising from the use of CGC software will be discussed later in Part 5.3. The next few sub-sections will touch on the applicable law when a party relies on a CG contract, interpretation issues and the void or voidable aspects of CG contracts.

Before moving on to how CG contracts alter traditional contract law principles, it is important to first establish the applicable law when discussing the legal issues arising from the reliance on CG contracts. Firstly, insofar where the use of CG contracts and the application of principles on the interpretation and enforceability of contracts is concerned, EU law applies only to the extent in which country's laws should apply to the contract (i.e. the Rome I Regulation in situations where there is a conflict of law),<sup>124</sup> but does not however govern the enforceability, formation or interpretation of a contract beyond this,

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<sup>124</sup> Regulation (EC) No 593/2008 of the European Parliament and of the Council of 17 June 2008 on the law applicable to contractual obligations.

save for specific types of contracts, e.g. e-commerce contracts,<sup>125</sup> and contracts for consumers,<sup>126</sup> whereby there are applicable EU directives that may affect how such contracts should be interpreted. In this regard, jurisdiction specific laws from both the UK and Austria will be used to analyze the legal issues arising from the use of CG contracts. Thus, the contract laws of each country (US, UK and Austria) will be referred to. There are two main effects arising from the reliance of CG contracts – that of interpretation issues and void or voidability of contracts – which will be dealt with in the subsequent paragraphs.

### 5.2.1 Interpretation Issues

When a CG contract is created, the software becomes the drafter of the contract in place of the lawyer. This leads to certain problems when it comes to the interpretation of ambiguous terms. When an ambiguous term occurs, each legal system employs specific principles to interpret contracts so as to ascertain the meaning of the term with clarity. The US, UK and Austrian legal systems generally converge on the same point that the interpretation is not the meaning given to it in words and dictionaries, but rather by the meaning as intended by the parties based on the context of the contract.

Under US contract law, courts must first consider the plain language of the contract, and how a contract should be interpreted is based on the intention of the parties.<sup>127</sup> As for the UK, the principles of interpreting contracts have been summarized by Lord Hoffman in

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<sup>125</sup> The EU e-Commerce Directive governs contracts made on the Internet. See Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market ('Directive on electronic commerce') [hereinafter *e-Commerce Directive*].

<sup>126</sup> The EU has also enacted the Directive on Consumer Rights so as to ensure that the consumer's rights, a fundamental right of a EU citizen, is protected. See Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council [hereinafter *Directive on Consumer Rights*].

<sup>127</sup> See also 72. *Principles of Contract Interpretation*, U.S. DEPARTMENT OF JUSTICE: OFFICES OF THE UNITED STATES ATTORNEYS, <https://www.justice.gov/usam/civil-resource-manual-72-principles-contract-interpretation> (last visited Jul. 14, 2016).

*Investors Compensation Scheme Ltd v West Bromwich Building Society*;<sup>128</sup> in which it was held that the meaning of the document is “what the parties using those words against the relevant background would reasonably have been understood to mean”.<sup>129</sup> In Treitel’s *The Law of Contract*, a further summary on the relevant principles in contract interpretation is listed and commentaries on these principles have been provided as well.<sup>130</sup> Whereas in Austria, the interpretation of contracts is governed by § 914 of the ABGB, which states that the interpretation of the contract is not based on the literal sense of the term, but [the interpretation] is to explore and understand the contract as intended by the parties, as it so corresponds to the practice of fair communication.<sup>131</sup> If the terms in the contract are unambiguous, the terms must be interpreted based on the intention of the parties as per their declaration of intent (*Willenserklärung*). The test to establish this declaration of intent (*Willenserklärung*) is by “evaluating what the addressee could have recognized as being the intention of the person making the declaration”,<sup>132</sup> and should it still be ambiguous, the “customs of fair dealing”<sup>133</sup> will be considered in aiding the interpretation of the term. While contract interpretation is not harmonized on the EU level as previously mentioned,<sup>134</sup> one should bear in mind that there are some pockets of EU law that may still apply to specific contracts; for instance, if the contract falls under that of the Unfair Terms in Consumer Contracts Directive,<sup>135</sup> the contract will be interpreted “most favorable to the consumer”<sup>136</sup> if there is a doubt in the definition of a term.<sup>137</sup>

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<sup>128</sup> [1997] U.K.H.L. 28, <http://www.bailii.org/cgi-bin/markup.cgi?doc=uk/cases/UKHL/1997/28.html&query=Investors%20compensation%20scheme>.

<sup>129</sup> *Id.*

<sup>130</sup> TREITEL, *supra* note 110, at 227-233 [6-006-6-013].

<sup>131</sup> See also HERBERT HAUSMANINGER, THE AUSTRIAN LEGAL SYSTEM 250 (4th ed. 2011). [*Interpretation of Contracts*].

<sup>132</sup> *Id.* at 250.

<sup>133</sup> *Id.*

<sup>134</sup> While there have been talks about enacting a Modern European Contract Code, there are no such uniform contract laws that are in place as of date. See TREITEL, *supra* note 110, at 8 [1-012].

<sup>135</sup> Council Directive 93/13/EEC of 5 April 1993 on unfair terms in consumer contracts.

<sup>136</sup> *Id.* at art. 5.

<sup>137</sup> *Id.*

Generally, this should not pose a problem for CG contracts since if there are ambiguous terms, clarity on the ambiguous term is established by focusing on the intention of the parties rather than the drafter himself. Should there be a dispute in the interpretation of the contract, the parties will be required to testify on their intention. If there are lawyers present during the drafting of the contract, they may be called to give evidence on the actual intention of the parties, although this may be barred due to the parol evidence rule. Assuming that the parol evidence rule is not applicable, there may not be any other third party providing evidence on the intention of the parties save for the parties themselves if CGC software is used. In this case, no lawyers can be called to testify since there are no lawyers involved to begin with, and only the parties can confirm their intention. One possibility in which CGC software can give evidence on the intention of parties could be one where the CGC software keeps a log on the parties' actions when using the software to draft the contract (e.g. deleting, adding, and amending clauses on a template provided by the CGC software). Such logs may arguably suggest the intention of the parties, although the admittance of such evidence at trial is subject to the usual rules of evidence, and how a judge should interpret such computer logs to determine the intention of the parties can potentially open a can of worms. Testimony may also be required from the developers to confirm that the computer logs indeed represent the previous actions of the parties, and that the developer cannot tamper with such logs.

Furthermore, there are other maxims in the US and UK legal systems that influences contractual interpretation, and this may cause some complexities when applied to CG contracts. One well-known maxim is the *contra proferentem* rule, which is a rule of interpretation which states that the words in the contract are to be construed against the draftsman.<sup>138</sup> In practice, this means that a person who drafts the contract or hires a

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<sup>138</sup> TREITEL, *supra* note 110, at 270-271 [7-015].

lawyer to represent him in drafting the contract will have the terms interpreted against him in the event of doubt. When a person has hired a lawyer to prepare the contract, or undertakes the legal implications that arise from preparing the contract himself, it is clear that the contract was to be interpreted against him unless parties contracted out of this (i.e. a clause was included within a contract that states that this rule did not apply).

However, if a party uses CGC software to generate a CG contract, should the contra proferentem rule apply to him? Arguably, he is not legally represented, nor is he the drafter: the draftsman is the AI system, although he has provided the computer with his intentions. In this case, one approach to take is that since the party decided to use CGC software to create his contracts, the party likewise undertakes the risk if there are ambiguous terms in the contract and these are interpreted against him. This is despite the fact that an independent developer has created the CGC software. The premise for this is that the party has inputted his intentions into the CGC software, and since the CGC software is acting as per his instructions, the party so inputting or preparing the contract using the CGC software should bear the risk. If the party wanted to eliminate the liability arising from having a contract interpreted against him, one option could be hiring a lawyer to draft the contract instead of CGC software. This is due to the fact that a lawyer, when drafting the contract, also undertakes the liability arising from a negligently drafted contract. The deciding factor is the costs incurred in preparing a contract – while a lawyer may be costlier, there is recourse against the lawyer if he drafted an ambiguous contract, such as that of professional negligence or lodging a complaint at the relevant bar association.<sup>139</sup> In the case of CGC software, there are fewer avenues for compensation, or

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<sup>139</sup> A disgruntled client can always sue his or her lawyer representing him or her for negligence, and can further complain to the bar association that the lawyer belongs to if the client feels that the lawyer has breached his or her professional and ethical duties as a lawyer. For instance, the California Bar Association allows clients to make complaints against their lawyers through an attorney complaint hotline: 800-843-9053 (with the applicable US calling code). See *Lawyer Regulation*, THE STATE BAR OF CALIFORNIA, <http://www.calbar.ca.gov/Attorneys/LawyerRegulation.aspx> (last visited Jul. 14, 2016).

perhaps none – the issue on whether a party can claim against the CGC software or the developer if the CG contract turns out awry will be discussed later in this paper at Parts 5.3.1.2 to 5.3.1.5.

### **5.2.2 Void or Voidable Contracts**

As previously explained, there is no lawyer involved in the drafting of the contract when a CGC software is used. This also means that there is no legally trained person to explain the terms of the contract or what has been drafted to the individual or businessman. More importantly, there is no legally trained person to ensure that either of the parties using the contract actually understands the terms of the contract. In such a situation, can a CG contract be void because of the individual or consumer's failure to understand the terms in the CG contract? Furthermore, can a party argue that a CG contract should not be void because it has been produced by independent and autonomous software?

At this juncture, it may be useful to study how such cases are dealt with under traditional contract drafting. When Party *A* has prepared a contract, and Party *B* initials on every page of the contract and signs it at the end, it is presumed that Party *B* agrees and understands to the terms of the contract which he has signed (assuming that all elements in the formation and enforcement of a contract are satisfied). If Party *B* subsequently pleads that he did not read all the terms of the contract nor understood some terms of the contract, whether the contract is still enforceable against Party *B* depends on the jurisdiction. A party that has US contract law applicable to its circumstances is bound to the contract if he or she signs it,<sup>140</sup> and the contract remains enforceable as against the parties so signing as long as there are no other facts that would allow the contract to be void or be voidable, such as in the case of fraud or duress.<sup>141</sup> The UK takes the same

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<sup>140</sup> The UCC has provided for this. See U.C.C. § 440-2201 (AM. LAW INST. & UNIF. LAW COMM'N 1977).

<sup>141</sup> KLASS, *supra* note 104, at 31.

position as the US. In the UK, the contract remains enforceable against Party *B* as long as he has signed it,<sup>142</sup> save for specific situations such as duress or mistake which can void a contract or render a contract voidable.<sup>143</sup> This is similar under Austrian law as per the principle of *pacta sunt servanda*, i.e. when a party has accepted the terms of the contract such as by signing, each contract clause is binding on the parties,<sup>144</sup> assuming that the contract was not entered against good morals (*Sittenwidrigkeit*)<sup>145</sup> and there are no elements present to nullify the contract (e.g. mistake or fraud).<sup>146</sup>

The aforementioned situation poses a problem for CG contracts. When a person uses a CGC software or even a document automation software without legal advice, which thereafter generates contracts that have boilerplate clauses, there is a high likelihood that the person who has signed the contract may not have fully understood the terms therein. For instance, a layperson may not understand the differences between court proceedings and arbitration, let alone the cost implications arising from inserting a clause that requires an arbitration tribunal comprising of three arbitrators. Should the CGC contract produce a boilerplate clause stating that parties are to go for an arbitration with three arbitrators, the costs of such an arbitration may be more than court proceedings itself, and if existing contract law principles are to apply, this contract will still be upheld as valid and binding as long as parties have signed it even if they may not have understood what is an arbitration proceeding. This is because the signature will be deemed as an understanding by both parties that they have understood the terms of the

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<sup>142</sup> L'Estrange v. F Graucob Ltd [1934] K.B. 394.

<sup>143</sup> The issues of duress, mistake and fraud are explained in further detail in both Treitel and Chitty on Contracts. See generally TREITEL, *supra* note 110 [sections on duress and mistake]; CHITTY ON CONTRACTS, *supra* note 110 [sections on duress and mistake].

<sup>144</sup> HEINZ BARTA, ZIVILRECHT 283 (1st ed. 2004),

[https://www.uibk.ac.at/zivilrecht/buch/pdf/zivilrecht2004\\_kapitel5.pdf](https://www.uibk.ac.at/zivilrecht/buch/pdf/zivilrecht2004_kapitel5.pdf) [pacta sunt servanda].

<sup>145</sup> Under the ABGB, a contract can be void if the parties entering into it lacked good faith. ABGB, *supra* note 84, § 879.

<sup>146</sup> Under Austrian civil law, a contract can be void if there is a mistake (*Irrtum*) as parties do not have the same 'declaration of intent' (*Willenserklärung*) to allow the contract to be valid and binding. See ABGB, *supra* note 84, § 871 [provision in the ABGB which governs contractual mistakes]; see also JOHANNES PEPELNIK & CARMEN SCHUBER, GRUNDLAGEN DES VERTRAGSRECHTS 37-40 (1st ed. 2012).

contract, assuming that there are no other aspects that can negate void the contract or render it voidable, e.g. duress or undue influence. Individuals or businesses that rely on CG contracts must therefore ensure that they understand what they are signing before actually signing it, especially if they are using such CG contracts without any legal advice.

Under English law, however, there is a special situation where the party so signing is required to have received independent legal advice before signing, such as in the case of spouses, where a couple is undertaking a loan or a guarantee at his or her own detriment for the benefit of his or her spouse.<sup>147</sup> The bank is required to show that their customers in the aforementioned situation have received independent legal advice prior to signing the contract, failing which, the contract may be set aside for undue influence if attempted to be enforced at the courts.<sup>148</sup> Here, if a bank were to use a CG contract, it must still ensure that the signatory has sought legal independent advice from a solicitor even if the software provides for a description of the clauses in the CG contract. The reading of these clauses do not satisfy the requirement that a party has sought independent legal advice; as seen in *Royal Bank of Scotland plc v Etridge (No. 2)* (“*Etridge*”), a solicitor must certify that the borrowers have fully understood the terms of the contract.

The above paragraphs show that despite the convenience of CG contracts, parties should only sign the contract if they actually understand the terms of the contract – shifting the blame to the CGC software for producing a complicated contract does not absolve them of their obligations under the contract. The use of CG contracts only serves as a commercial convenience, however, it does not necessarily mean that it will satisfy legal requirements for certain contracts as seen in the case of *Etridge*. One possible argument against the application of *Etridge* is that since an independent developer created the CGC

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<sup>147</sup> *Royal Bank of Scotland v. Etridge (No. 2)* [2001] U.K.H.L. 44 [hereinafter *Etridge No. 2*].

<sup>148</sup> *Id.*

software, the contract produced by the CGC software should not favor one party over the other. However, this argument has flaws. Firstly, the contract that the CGC software generates is based on data that is fed to the CGC software. Certain contracts such as bank facilities or mortgages are almost always prepared by banks. If the data fed to the CGC software were derived from contract templates taken from banks, the output contract will unsurprisingly be a contract that is biased towards the bank. Next, even if an independent developer were to develop the CGC software, this does not necessarily mean that the signatories to the contract may actually understand it. CGC software that produces a contract containing archaic legalese can easily baffle non-legally trained persons.

In this regard, the traditional contract law principles on void and voidability of the contract remain largely the same, in the sense that parties relying on CG contracts cannot argue that the contract should not be void just because it is a contract produced by an independent and autonomous software, and the contract will be a fair contract to both parties, thereby not requiring the signatory who has less bargaining power to seek independent legal advice before signing the contract. For public policy reasons, such as to protect specific classes of people from financial exploitation especially where the sale or mortgage of family homes are concerned, independent legal advice may still be required for particular situations even if CGC software or the CG contract may have provided explanations to the specific clauses. Regardless, the fact that there is no relief if parties use CG contracts and do not fully understand them only reinforces this old adage of *caveat lector*: always read the contract before initialing or signing it.

### ***5.3 Legal Issues Arising from the Use of Computer Generated Contract***

#### ***Software***

If CGC software has the capability to replace lawyers or at least certain functions previously done by lawyers (e.g. document automation software versus editing standard contracts manually), should CGC software be regulated in the same manner as lawyers? Are there even any regulations pertaining to CGC software? There are many legal issues that can arise from the use of CGC software. The driving question behind this sub-section is as such: what are the legal consequences when machine replaces man? In the context of contract drafting, both lawyers and software are essentially providing the same service: drafting a contract for the client. However, lawyers and software are regulated dissimilarly. CGC software or similar software tends to fall under the category of unregulated legal service providers,<sup>149</sup> whereas lawyers are usually regulated by professional ethical codes. Considering that both provide the same service, should they then be regulated in the same manner? Another point for discussion is the use of software by consumers – if consumers rely on software for legal services, do they have any legal recourse if such legal advice is negligently given?

In order to tackle these issues, it is important to first lay down the existing regulations for software and the existing regulations for lawyers and/or the legal industry. After understanding what are the existing regulations that apply for both CGC software and lawyers, one can proceed to discuss and examine the issues that arise due to the differences in regulations between software and lawyers, and the impact on individuals, businesses and consumers if they were to choose to use software instead of lawyers. This section will also deal with the debate surrounding the liability of AI systems, and whether

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<sup>149</sup> Am. Bar Ass'n, *For Comment: Issues Paper Concerning Unregulated LSP Entities* (Mar. 31, 2016) [http://www.americanbar.org/content/dam/aba/images/office\\_president/final\\_unregulated\\_lsp\\_entities\\_issue\\_s\\_paper.pdf](http://www.americanbar.org/content/dam/aba/images/office_president/final_unregulated_lsp_entities_issue_s_paper.pdf).

CGC software powered by an AI system can be rendered liable for its actions, instead of the software developer or the user bearing the burden of a wrong or negligent output from the CGC software.

### **5.3.1 Existing Regulations for Software**

Software has been defined as a “program and other operating information used by a computer”,<sup>150</sup> and in the context of this thesis, software refers to the CGC software that produces contracts either using AI or through document automation algorithms. In all three jurisdictions, i.e. the US, UK and Austria, the extent in which software is regulated varies – these regulations stretch from consumer protection for the use of software, product liability, and even to the collection and storage of personal data by developers. For CGC software, the most pertinent issues relating to it and its regulation are the following: (1) whether it is legal for CGC software to provide legal advice or legal services; (2) consumer protection for the use of CGC software; and (3) whether there are any potential product liability issues that CGC software developers face if the software is faulty.

#### 5.3.1.1 The provision of legal advice

Whether CGC software can legally provide legal advice in the form of preparing or drafting contracts is an interesting question. The first question to answer is whether it is illegal for a non-authorized legal service provider to provide contract drafting services. In all three jurisdictions, it is clear that certain legal activities can only be undertaken by qualified persons as per the relevant statutes – e.g. seeking an audience before the court can only be done by practicing lawyers (or barristers in the case of the UK). Thus,

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<sup>150</sup> *Software*, OXFORD DICTIONARIES, <http://www.oxforddictionaries.com/definition/english/software>.

whether it is illegal for CGC software to draft contracts depends on whether contract drafting services fall under the purview of regulated legal activities.

However, whether contract drafting services fall under the list of regulated activities in the relevant statutes depends on how the contract drafting services are packaged, i.e. whether such contract drafting is a standalone service or it comes with legal advice on how the terms and conditions should be drafted in the contract. In the US, the provision of legal advice by a non-qualified attorney is generally prohibited,<sup>151</sup> although it should be noted that what constitutes the practice of law and whether the practice of law encompasses the rendering of legal advice differs across each state.<sup>152</sup> Under UK law, contract drafting may potentially fall under a ‘reserved legal activity’ for lawyers if the drafting services also consist of “the provision of legal advice or assistance in connection with the application of the law”.<sup>153</sup> Therefore, if the contract drafting services itself does not include any provision of legal advice, it is technically not a reserved legal activity and can be done by CGC software. In Austria, the *Winkelschreibereivordnung*<sup>154</sup> (Pettifogger’s<sup>155</sup> Regulation) determines whether any legal activity done by a non-lawyer

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<sup>151</sup> In several states, the giving of legal advice is deemed as practicing law, and the practice of law may thus be restricted to practicing attorneys only. For example, the State of California deems the giving of legal advice as practicing law, and the State of California only allows practicing attorneys that are members of the Californian Bar Association to practice law. A person who is not an active member of the state bar and advertises himself as being entitled to practice law can be charged with a misdemeanor. See AM. BAR ASS’N, *Appendix A: State Definitions of the Practice of Law*, [http://www.americanbar.org/content/dam/aba/migrated/cpr/model-def/model\\_def\\_statutes.authcheckdam.pdf](http://www.americanbar.org/content/dam/aba/migrated/cpr/model-def/model_def_statutes.authcheckdam.pdf); CAL. BUS. & PROF. CODE §§ 6125-6126.

<sup>152</sup> A.M. BAR ASS’N, *id.*

<sup>153</sup> Legal Services Act, 2007, c. 29, § 12 ¶ 3 Letter b (U.K.), <http://www.legislation.gov.uk/ukpga/2007/29/contents>.

<sup>154</sup> VERORDNUNG DES JUSTIZMINISTERIUMS VOM 8. JUNI 1857, WIRKSAM FÜR DEN GANZEN UMFANG DES REICHES, MIT AUSNAHME DER MILITÄRGRÄNZE, BETREFFEND DIE BEHANDLUNG DER WINKELSCHREIBER [PETTIFORGER’S REGULATION] [Reichsgesetzblatt] [RGBL] 114/1857, as amended, <https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=10005178> (Austria).

<sup>155</sup> The translation of “Winkelschreiber” is difficult. Technically, a “pettifogger” is a person who “practices legal deception or trickery”; see Pettifogger, Oxford Dictionaries, <http://www.oxforddictionaries.com/definition/english/pettifogger>. This translation is based on the translation provided by the Austrian *Bundeskanzleramt* in their translation of the EINFÜHRUNGSGESETZ ZU DEN VERWALTUNGSVERFAHRENGESETZEN 2008 [EGVG] [INTRODUCTORY ACT TO THE ADMINISTRATIVE PROCEDURE ACTS 2008] BUNDESGESETZBLATT [BGBl] I No. 87/2008, as amended, § III ¶ 1, [https://www.ris.bka.gv.at/Dokument.wxe?Abfrage=ErV&Dokumentnummer=ERV\\_2008\\_1\\_87&ResultFun](https://www.ris.bka.gv.at/Dokument.wxe?Abfrage=ErV&Dokumentnummer=ERV_2008_1_87&ResultFun)

can be sanctioned. The Pettifogger's Regulation provides for the case where if a person who is not authorized by a competent authority makes his business out of legal activities involving representation based on a fee, he would have committed a criminal offence, and be liable for prosecution. Based on this definition, it appears that contract drafting is not deemed as a restricted legal activity that can only be done by lawyers since it does not involve the representation of parties' at court.

Therefore, the contract drafting services provided by CGC software are not per se illegal unless the CGC software provides legal advice as well. This is however a rather thin line to tread on – for instance, in the case of Clausehound, would the spotting and informing the user of lacunas in a contract constitute giving legal advice? Technically speaking, Clausehound does not apply any law and would fall out of the ambit of the provision of legal services, although it depends on how far the definition of the provision of legal services will be stretched. It will not be surprising if the definition would apply to situations where the CGC software is not just able to draft the contract as inputted by the user, but also provide recommendations for certain clauses, for instance recommending users to replace their dispute resolution clause to that of arbitration, based on prevailing practices and law which the CGC software has derived from the data of contracts which are fed into the AI system. This activity of providing recommendations on which clauses can easily constitute provision of legal services, as it is giving legal advice to consumers by recommending them the best clause to insert in their contract for their purposes. While this is technically not tantamount to contract drafting, the provision of such forms of legal advice can easily be included in CGC software. Developers must be aware of how their “contract drafting services” are packaged in the CGC software (i.e. truly contract drafting, or with the provision of legal advice as well), and must be careful on whether the services

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[ctionToken=94fa30b8-d37c-4cd2-b79e-e3e88cd3b496&Position=1&Titel=&Quelle=&ImRisSeit=Undefined&ResultPageSize=100&Suchworte=w](https://www.inkelschreiberei.at/ctionToken=94fa30b8-d37c-4cd2-b79e-e3e88cd3b496&Position=1&Titel=&Quelle=&ImRisSeit=Undefined&ResultPageSize=100&Suchworte=w)  
[inkelschreiberei](https://www.inkelschreiberei.at/) (Austria).

in the CGC software can only be exclusively provided by lawyers. A further discussion on whether such CGC software should then be regulated in the same manner as lawyers can be found at Part 7.2.

#### 5.3.1.2 Consumer protection for CGC software: in general

If CGC software does not provide services that makes them fall outside the ambit of the class of restricted legal activities that are reserved for lawyers, this means that CGC software can freely operate in the legal market. Even though CGC software and lawyers operate in the same market, the regulations that apply on each differ widely. The applicable regulations for CGC software are the same regulations that apply to software generally, rather than the regulations that apply to lawyers such as specific codes of conduct or legal ethics. In the case of software, the regulations include consumer protection, and more specifically, product liability arising from the use of such software. With these software regulations in mind, the next is to explore aspects pertaining to the use of CGC software, i.e. what are the existing consumer protection regulations (if any) with regard to the use of software or legal technology.

Consumer protection is a large body of law that is concerned with protecting consumer rights, such as ensuring a fair marketplace, and restricting businesses from practicing unfairly or fraudulently to the detriment of consumers.<sup>156</sup> This can include compelling businesses to disclose information about the products that they are selling, ensuring that businesses sell safe products to consumers, and allowing consumers to seek redress against businesses that sell shoddy or problematic products. The US and EU have enacted various regulations and laws to protect consumers from abusive practices by businesses,

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<sup>156</sup> *Bureau of Consumer Protection*, FED. TRADE COMMISSION, <https://www.ftc.gov/about-ftc/bureaus-offices/bureau-consumer-protection> (last visited Jul. 13, 2016).

and the subject of this section is then the extent to which such laws and regulations apply to software and, in particular, CGC software.

Software is a broad term that can encompass several different types and forms. Furthermore, consumer protection for software can cover many areas as well. This can include ensuring software developers provide sufficient information on the software, ensure interoperability, and reveal limitations of the software. Upon purchasing or downloading of a software, the terms and conditions for the use of the software can be found in the form of an agreement either on the packaging of the product or on a web page prior to downloading the software, although such an agreement may not even exist in certain cases where a party downloads free software from the Internet. In light of the numerous avenues of protection a consumer can receive, and bearing in mind the purposes of this thesis, consumer protection from CGC software will be analyzed in two stages. The first stage involves consumer protection before the purchase of CGC software, i.e. necessary information and disclaimers for the consumer before the consumer agrees to use the software either by downloading the software or purchasing it. The second stage involves the use of the software and problems arising therefrom, such as the enforceability of the terms and conditions of the use of the software as against the software developer (of which the terms and conditions are contained in an agreement that is more commonly known as an 'End-User License Agreement'), and product liability issues.

#### 5.3.1.3 Consumer protection: prior to purchasing or downloading the software

Software is a digital product that can take the form of an application, or 'app', in a smartphone or a computer program that is pre-installed on an operating system. Software companies are usually expected to provide certain details on the software that they are

selling. Considering the broad extent of what software can be, what is expected from software developers is generally rather grey with respect to the necessary product information that should be disclosed.

Consumer protection in the US is regulated on both the federal and state level. At the federal level, consumer protection is regulated by the Federal Trade Commission (“FTC”), which intends to “prevent business practices that are anticompetitive or deceptive or unfair to consumers; to enhance informed consumer choice and public understanding of the competitive process; and to accomplish this without unduly burdening legitimate business activity.”<sup>157</sup> Besides the FTC, states enforce consumer protection laws, although there is no “single overarching consumer protection department or agency”.<sup>158</sup> As per statistics from the FTC, the number of complaints with regard to computer equipment and software was 2% of total complaints as of 2009, although the number of complaints pertaining to the software industry – in particular for mobile applications – has since increased. As of 2015, the total amount of complaints from the technology sector constituted 7% of the total amount of complaints received by the FTC.<sup>159</sup>

It is not unsurprising to see that software companies have been sued by the FTC, and based on the FTC’s Quarterly Litigation Status Report, there are at least three suits commenced against software as of March 2016.<sup>160</sup> All of these suits were filed against the company as their practices contravened Section 5 of the Federal Trade Commission Act (“FTC Act”), whereby section 5 stipulates that “unfair or deceptive acts or practices in or

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<sup>157</sup> *About the FTC*, FED. TRADE COMMISSION, <https://www.ftc.gov/about-ftc> (last visited Jul. 13, 2016).

<sup>158</sup> Spencer Weber Waller, Jillian G. Brady & R.J. Acosta, *Consumer Protection in the United States: an overview* 17, <http://www.luc.edu/media/lucedu/law/centers/antitrust/pdfs/publications/workingpapers/USConsumerProtectionFormatted.pdf> (last visited Oct. 13, 2016).

<sup>159</sup> *Stats & Data 2015*, FED. TRADE COMMISSION (2015), <https://www.ftc.gov/system/files/attachments/stats-data-2015/statsdata2015.pdf>.

<sup>160</sup> See *Quarterly Federal Court Litigation Status Report*, FED. TRADE COMMISSION (Mar. 31, 2016), [https://www.ftc.gov/system/files/attachments/quarterly-litigation-status-report/2016\\_03\\_quarterlylitigationrpt.pdf](https://www.ftc.gov/system/files/attachments/quarterly-litigation-status-report/2016_03_quarterlylitigationrpt.pdf).

affecting commerce”.<sup>161</sup> The FTC in its Policy Statement on Deception<sup>162</sup> has further provided information on when the FTC would deem that a business has contravened Section 5 of the FTC Act. Apart from the FTC Act, there are no other relevant federal rules or legislation for software. On the state level, while there exist some regulations with regard to computer software, such state laws deal primarily with the installation of spyware on computers.<sup>163</sup>

Essentially, software companies are subject to the general standard consumer protection rules as per the FTC Act and other applicable state regulations, and accordingly, companies may not “make false or misleading misrepresentations with regard to the capabilities or efficacy of its software products”,<sup>164</sup> install software that “collects personally identifiable information without notice or consent”,<sup>165</sup> and “[seize] control of a user’s computer to perform certain tasks”.<sup>166</sup> These same rules then apply to CGC software as well – the software company selling the CGC software should not misrepresent the capabilities of the software, install software that collects personal data without consent, and takeover the user’s computer to perform specific tasks.

As for the UK and Austria, the EU has enacted several legislation governing consumer protection, such as the EU Directive on Consumer Rights, which has recently been revised to ensure that consumers have “better protection in relation to digital content, especially regarding information on the software and hardware the products work

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<sup>161</sup> FED. TRADE ACT, § 5.

<sup>162</sup> Letter from James C. Miller III, Chairman, Fed. Trade Comm’n, to John D. Dingell, Chairman, Comm. on Energy and Commerce, U.S. House of Representatives (Oct. 14, 1983), [https://www.ftc.gov/system/files/documents/public\\_statements/410531/831014deceptionstmt.pdf](https://www.ftc.gov/system/files/documents/public_statements/410531/831014deceptionstmt.pdf).

<sup>163</sup> CAL. BUS. & PROF. CODE, *supra* note 151, §§ 22947.1-22947.5.

<sup>164</sup> AM. BAR ASS’N, ABA SECTION OF ANTITRUST LAW, CONSUMER PROTECTION LAW DEVELOPMENTS (2009) 188-190 (August Horvath et al. eds., 2009).

<sup>165</sup> *Id.* at 188.

<sup>166</sup> *Id.* at 189.

with.”<sup>167</sup> Member states will have to apply these new laws from 13 June 2014.<sup>168</sup> Under this directive, software developers are required to provide specific information to consumers, such as the “functionality” and the “limitations” of the product.<sup>169</sup> The EU’s guidance note for the implementation of this new EU Directive on Consumer Rights has provided a checklist to give software companies an idea of what should be disclosed, e.g. the language of the content, the limit on the reuse of the content, and the need for internet connection to use the product, although the points under this checklist are to be varied to be “as appropriate to the product”.<sup>170</sup> Due to the wide variety of software available in the market, the EU has stated that “the trader should assess the need to provide this information according to a particular product's characteristics.”<sup>171</sup> For the purposes of CGC software, it is still unknown whether “limitations” such as the limited geographical applicability of CGC software (i.e. software is only for consumers from Germany) must be stated, if the CGC software is only intended to produce contracts based on German law. This means that CGC software companies are not bound to disclose information in a specific manner, and have some degree of flexibility in choosing what they should disclose.

Apart from the Directive on Consumer Rights, another relevant directive with regard to the use of CGC software is the e-Commerce Directive,<sup>172</sup> which was enacted to “ensure

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<sup>167</sup> European Commission Press Release IP/14/655, Taking consumer rights into the digital age: over 507 million citizens will benefit as of today (June 13, 2014), [http://europa.eu/rapid/press-release\\_IP-14-655\\_en.htm](http://europa.eu/rapid/press-release_IP-14-655_en.htm).

<sup>168</sup> See *The Directive on Consumer Rights*, EUROPEAN COMMISSION, [http://ec.europa.eu/consumers/consumer\\_rights/rights-contracts/directive/index\\_en.htm](http://ec.europa.eu/consumers/consumer_rights/rights-contracts/directive/index_en.htm) (last visited Jul. 14, 2016).

<sup>169</sup> *DG Justice Guidance Document concerning Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council*, at 67-68 (June 2014), [http://ec.europa.eu/justice/consumer-marketing/files/crd\\_guidance\\_en.pdf](http://ec.europa.eu/justice/consumer-marketing/files/crd_guidance_en.pdf).

<sup>170</sup> *Id.* at 67.

<sup>171</sup> *Id.*

<sup>172</sup> E-COMMERCE DIRECTIVE, *supra* note 125.

legal certainty and consumer confidence”<sup>173</sup> in the EU’s internal market for electronic commerce. The e-Commerce Directive requires member states to ensure that service providers (in this case, CGC software or distributors of CGC software falls under this definition as well)<sup>174</sup> conform to specific regulations. Service providers are obligated to provide a minimum amount of information as stipulated in Articles 5 and 6 of the e-Commerce Directive. Furthermore, if the party so using its service is a consumer or a business that does not waive its right to information under Article 10, a service provider must ensure that the following information is given to such party in a clear, comprehensible and unambiguous manner: (1) “the different technical steps to follow to conclude the contract”;<sup>175</sup> (2) “whether or not the concluded contract will be filed by the service provider and whether it will be accessible”;<sup>176</sup> (3) the technical means for identifying and correcting input errors prior to the placing of the order”;<sup>177</sup> and (4) “the languages offered for the conclusion of the contract.”<sup>178</sup> A service provider is not obliged to “monitor the information which they transmit or store”,<sup>179</sup> nor actively “seek facts or circumstances indicating illegal activity” as well.<sup>180</sup> As of present, the UK has adopted into its national laws via The Electronic Commerce (EC Directive) Regulations 2002,<sup>181</sup> while Austria has done so under the E-Commerce Act (*e-Commerce-Gesetz*).<sup>182</sup>

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<sup>173</sup> *Id.* at ¶ 7 of the Preamble.

<sup>174</sup> The e-Commerce Directive defines ‘service providers’ as “any natural or legal person providing an information society service”, and the definition of ‘information society service’ covers “this definition covers any service normally provided for remuneration, at a distance, by means of electronic equipment for the processing (including digital compression) and storage of data, and at the individual request of a recipient of a service”. See E-COMMERCE DIRECTIVE, *supra* note 125, at (17) & art. 2(b).

<sup>175</sup> E-COMMERCE DIRECTIVE, *supra* note 125, at art. 10.

<sup>176</sup> *Id.*

<sup>177</sup> *Id.*

<sup>178</sup> *Id.*

<sup>179</sup> *Id.* at art. 15.

<sup>180</sup> *Id.*

<sup>181</sup> The Electronic Commerce (EC Directive) Regulations 2002, 2002 No. 2013 (U.K.).

<sup>182</sup> BUNDESGESETZ, MIT DEM BESTIMMTE RECHTLICHE ASPEKTE DES ELEKTRONISCHEN GESCHÄFTS UND RECHTSVERKEHRS GEREGELT WERDEN [E-COMMERCE-GESETZ – ECG] [E-COMMERCE ACT] BUNDESGESETZBLATT [BGBl.] No. 152/2001, as amended, <https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=20001703> (Austria).

To sum up, when advertising or marketing its software, software companies or distributors of the software are then obliged to provide specific sets of information (as per the applicable US and EU rules), and also to not engage in unfair practices. Apart from these regulations, it appears that there are no other specific consumer protection regulations that target software companies in the US or UK, although some states in the US such as California require software to be free of spyware as part of their consumer protection policy. If the software is defective or problematic when it is used by the consumer, they can proceed to file the case complaint to the respective consumer protection bureaus in their countries. The legal rights arising from a defective software product (here, a CGC software that produces badly drafted contracts) will be discussed in the subsequent section, where more analysis must be given in the event that product liability regulations apply to CGC software as well.

#### 5.3.1.4 Consumer protection: contractual agreements and product liability

In the event of defective software, rights of consumers against the software developer for such defects can arise in two cases. The first scenario arises when there is a contractual relationship between the consumer and the software developer. The second scenario arises when the consumer does not have a direct contractual relationship with the software developer and has to proceed under product liability. The enforceability of this contractual agreement is dependent on the laws and regulations of the jurisdiction in question, and the ability to claim against a software developer for product liability is also debatable. These questions will be dealt with in successive paragraphs – the first issue to be analyzed will be the situation where a consumer has a contractual relationship with the software developer.

How a contractual relationship forms between the software developer and a user is therefore important, and such a relationship generally falls into two broad categories: (1) contracts that involve the acquisition of the software itself, whereby the purchaser buys the entire software; and (2) contracts that involve the use of the software, or more commonly known as an end-user license agreement (“EULA”). The first category involves purchasing the entire software, including its source code; this is however not the focus of this discussion here. The second category governs the relationship between consumers of CGC software and the CGC software company. The EULA is a license contract that contains the terms and conditions governing the consumer’s (or end-user’s) use of the software, and includes clauses such as restrictions on copying and distributing, and warranties for product liability, amongst others. What is interesting about the EULA is how the contractual relationship is formed between the software developer and the end-user. Formation of a EULA for software can come in several ways, i.e. the ‘shrink-wrap’, ‘click-wrap’ or ‘browse-wrap’ methods. In a ‘shrink-wrap’ contract, the end-user expresses his or her acceptance of the EULA when he or she uses the product.<sup>183</sup> Whereas for a ‘click-wrap’ or ‘browse-wrap’ contract, the end-user expresses his or her acceptance of the EULA when he or she downloads the software from the Internet.

As with every other software, the use of CGC software is most likely to come with a license agreement or EULA, which will be entered between the end-user and the developer. With this come the usual dilemmas of software license agreements that surround the “shrink-wrap”, “click-wrap” and other forms of license agreements. Here, there is no doubt that the end-user intends to use the product – assuming that the end-user disagrees to the terms and conditions of the use of the software due to the ‘hidden’ nature of the software, this is a question of successful contractual formation between parties in

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<sup>183</sup> ‘Shrink-wrap’ is defined as a product that is “sold commercially as a read-made software package”. See *Shrink-wrap*, OXFORD DICTIONARIES, <http://www.oxforddictionaries.com/definition/english/shrink-wrap?q=shrink+wrap>.

the context of software license agreements, and thus not exactly relevant to this paper. In any event, the issue of contractual formation for the use or purchase of software plagues every kind of software, and is not CGC software specific. What is however of interest is whether these end-users – be it individuals or businesses – have recourse against the developer if the CGC software is defective, or provides negligent legal services.

As previously stated, the end-user or consumer has two possible actions against the software developer: (1) by contract if there is an EULA present; or (2) by pleading product liability if there is no EULA present, e.g. if the software was bought from a distributor or retail store. If there exists a contractual relationship by virtue of the EULA, then the court or arbiter has to consider whether the terms of the EULA will apply. Software developers or companies usually limit their liability through the extensive terms and conditions that they make the user accept in the EULA. In the US, whether an EULA is enforceable or not as against the end-user is not predictable – it largely depends on which state the case is heard, as only a few states have passed the Uniform Computer Transactions Act,<sup>184</sup> and different courts have had varying opinions on whether an EULA is a contract that falls under the UCC, thereby rendering hard to decide how an EULA should be treated (i.e. as a normal contract where state laws apply or a UCC contract).<sup>185</sup>

As a result of this lack of certainty in how EULAs will be interpreted, end-users or consumers may be deterred from challenging the EULA to begin with, considering the number of hurdles they would have to jump past before they can succeed in their case. The end-user or consumer would have to expend large amounts of time and money to settle the suit, which may prove to be too expensive and draining. As for the UK, the terms and conditions of the EULA will most likely be enforceable unless the clauses

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<sup>184</sup> See generally Brian D. McDonald, *The Uniform Computer Information Transactions Act*, 16 BERKELEY TECH. L.J. 461, (2001).

<sup>185</sup> KATHERYN A. ANDRESEN, LAW AND BUSINESS OF COMPUTER SOFTWARE 18-6-18-8 (2009).

contained therein breach the provisions of the Unfair Contract Terms Act,<sup>186</sup> in which case lawyers preparing the EULA for the software company may be able to side-step this problem by ensuring that their EULAs do not violate the Unfair Contract Terms Act. However, under Austrian law, it has been argued that the EULA is classified as more of a “Standard Business Term” (*Allgemeine Geschäftsbedingungen*), which also means that if the clauses are so surprising to the end-user or consumer, these clauses will be void.<sup>187</sup>

Applying this to CGC software, this means that generally, the terms and conditions of the EULA pertaining to the CGC software are enforceable on the end-user, and the end-user may not have much recourse against the CGC software company if the CGC software company has contracted out himself out of any liability arising from the software producing a defective contract. In the case of Austria, while the clause in the EULA may be void if it takes the end-user or consumer by surprise, it would not be surprising that a CGC software company would contract himself out of such liability. In this regard, attempting to void the terms in the EULA may not be upheld since it was quite foreseeable that the CGC software company would have tried to avoid liability for the provision of negligent legal services to begin with.

In the case where there is no contractual relationship between the end-user or consumer and software company, i.e. the end-user bought the CGC software from a retail store off the shelf or from a distributor, the recourse that the consumer here has is that of product liability or a tortious claim. Software product liability is a rather contentious topic. In the software realm, software companies “assert that, in light of the unfeasibility of developing absolutely secure code, they should not be required to assume the risks associated with

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<sup>186</sup> Unfair Contract Terms Act, 1977, c. 50 (U.K.).

<sup>187</sup> See DIETMAR JAHNEL, PETER MADER & ELISABETH STAUDEGGER, *IT-RECHT* 92 (3rd ed. 2012); Harald Brennecke, *Lizenzrecht - eine Einführung in das Recht der Lizenzen - Teil 09 - Softwarelizenzen und EULA*, BRENNER & PARTNER, Feb. 2010, <http://www.brennecke.pro/178372/Lizenzrecht---eine-Einfuehrung-in-das-Recht-der-Lizenzen---Teil-09---Softwarelizenzen-und-EULA> (last visited Oct. 14, 2016).

the exploitation of vulnerabilities in their products.”<sup>188</sup> In the US, it would not be easy to claim against the software company under tort law “absent personal injury or damage to property outside the contemplation of the parties”. This is in part due to the near impossibility of the victim proving the economic loss doctrine, which basically states that a purchaser whose “expectations in a sale are frustrated because the product he bought is not working properly [has] his remedy (...) in contract alone.”<sup>189</sup> It has also been noted that courts have disallowed such actions in tort or product liability.<sup>190</sup>

As for the UK and Austria, the regulations relating to product liability are harmonized by the EU as per the Product Liability Directive,<sup>191</sup> which intends to impose strict liability to producers when the criteria as stipulated under the directive is fulfilled.<sup>192</sup> However, there are two queries to consider. Firstly, what is the extent of the harmonization of product liability regulations for EU member states, and secondly, to what extent does the Product Liability Directive apply to software? The Product Liability Directive was enacted by the EU on 25 July 1985, and was subsequently transposed into the national laws of UK and Austria via the Consumer Protection Act 1987<sup>193</sup> and the Federal Act Governing the Liability for a Defective Product (Product Liability Act)<sup>194</sup> respectively. Despite the adoption of EU laws on product liability by UK and Austria into their respective national laws, the definition of ‘product’ in the Product Liability Directive does not encapsulate software. Article 2 of the Product Liability Directive defines a ‘product’ as “all movables

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<sup>188</sup> Liis Vihul, *The Liability of Software Manufacturers for Defective Products*, 1 THE TALLINN PAPERS 1, 1 (2014), [https://ccdcoe.org/publications/TP\\_Vol1No2\\_Vihul.pdf](https://ccdcoe.org/publications/TP_Vol1No2_Vihul.pdf).

<sup>189</sup> ANDRESEN, *supra* note 185, at 18-15.

<sup>190</sup> *Id.* at 18-16.

<sup>191</sup> Council Directive 85/374/EEC of 25 July 1985 on the approximation of the laws, regulations and administrative provisions of the Member States concerning liability for defective products [hereinafter *Products Liability Directive*].

<sup>192</sup> *Id.*

<sup>193</sup> Consumer Protection Act, 1987, c. 43 (U.K.).

<sup>194</sup> BUNDESGESETZ VOM 21. JÄNNER 1988 ÜBER DIE HAFTUNG FÜR EIN FEHLEHRHAFTES PRODUKT (PRODUKTHAFTUNGSGESETZ) [PRODUKTHAFTUNGSGESETZ] [FEDERAL ACT OF 21<sup>ST</sup> JANUARY 1988 GOVERNING THE LIABILITY FOR A DEFECTIVE PRODUCT (PRODUCT LIABILITY ACT)] BUNDESGESETZBLATT [BGBl], No. 99/1988, as amended, [https://www.ris.bka.gv.at/Dokumente/ErV/ERV\\_1988\\_99/ERV\\_1988\\_99.pdf](https://www.ris.bka.gv.at/Dokumente/ErV/ERV_1988_99/ERV_1988_99.pdf) (Austria).

with the exception of primary agricultural products and game, even though incorporated into another movable or into an immovable.”<sup>195</sup> As seen in the Austrian Product Liability Act, a ‘product’ is defined as a “movable tangible property”,<sup>196</sup> and it is disputable whether software (i.e. an intangible product) is within the meaning of “product” for the purposes of the Austrian Product Liability Act.<sup>197</sup> In this case, a preliminary decision<sup>198</sup> before the European Court of Justice would be required so as to determine the ambit of the term ‘product’.

If the EU product liability directive does not afford protection to the consumer because software does not fall under the definition of ‘product’, it is suggested that policymakers consider this issue and ensure that the definition of ‘product’ encompasses software as well, or that a preliminary decision be sent to the European Court of Justice to decide whether ‘product’ will encompass software as well. While software is intangible, it is not unexpected if the number of consumers trying to sue for software product liability increases. Modern lifestyle requires us to use software – not just in the form of CGC software, but that of operating systems, smartphone applications – and software is a product just like other goods on the market. Policymakers however should also be careful to ensure that if they were to expand the meaning of ‘product’ to include software, then they must make sure that other intangible products will not fall into the same definition as a software. Even then, policymakers must also weigh the various public policy goals when deciding whether software developers should be subject to the same standard of product liability as other manufacturers. These goals include ensuring that “innovation

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<sup>195</sup> PRODUCTS LIABILITY DIRECTIVE, *supra* note 191, at art. 2.

<sup>196</sup> *Supra* note 194, at §4.

<sup>197</sup> PERNER, SPITZER & KODEK, *supra* note 99, at 355; GREITER PEGGER KOFLER & PARTNER, PRODUKTHAFTUNGS- UND PRODUKTSICHERHEITSRICHT 6 (Jan. 1, 2011), <http://www.lawfirm.at/ctgpk/uploads/Produkthaftungs-und-Produktsicherheitsrecht.pdf>.

<sup>198</sup> TFEU, *supra* note 113, at art. 267.

should not be stifled by legal rules”,<sup>199</sup> especially if the country is intending to grow its technology industry.

Ultimately, policymakers must be mindful of the signals it would send to the players in the technology or software industry if they were to enact legislation to make software developers liable for product liability, and must balance this with the need to protect consumers that have been harmed by software and have otherwise no recourse. This need to protect consumers may be even more important in the case of legal tech software such as CGC software or medical tech software, whereby a person’s rights or life can be dependent on the software itself. Whether policymakers will indeed change the meaning of ‘product’ to include software for the Product Liability Directive will of course ultimately depend on the will and sentiment of the EU on this issue.

#### 5.3.1.5 Summary on the existing regulations for software

Based on the above sections, consumer protection for software is governed by the general consumer protection laws for both the US and EU, and where the use of a software is concerned, the enforceability of the EULA is critical in determining whether a consumer can claim for defective software. It is important to note that should the EULA be enforceable, consumers will have to expend much time and money to insist on their rights as against the software developer for defective software, due to the existing uncertainty surrounding the scope of liability for software companies. All in all, a consumer who uses CGC software and receives negligent advice has little recourse (unless he has sufficient time and money to initiate a lawsuit) as against the CGC software company who produced the software so long as the CGC software company successfully protects itself through proper drafting of the EULA. Bearing these regulations on software in mind, the

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<sup>199</sup> PERNER, SPITZER & KODEK, *supra* note 99, at 283.

next step is to consider the existing regulations for lawyers, which will serve as a good contrast for the subsequent analysis at Part 5.3.3.

### **5.3.2 Existing Regulations for Lawyers**

The path to become admitted as a qualified lawyer is one that is highly regulated, and even after being admitted to the relevant bar association, lawyers are subject to strict regulations. For the same job, i.e. providing contract drafting services, lawyers are relatively much more constrained by regulations as compared to CGC software. Before discussing the impacts arising from the differences in the regulation of lawyers and CGC software in Part 5.3.3, this paper will first provide an introduction on how lawyers are regulated.

#### 5.3.2.1 Clarity on the term ‘lawyer’

The word ‘lawyer’ is taken to mean as a person who is legally entitled to practice law. This word however, is represented in different ways in the US, UK and Austria. In the US, a qualified lawyer is also called an attorney. In the UK, a lawyer can refer to either a solicitor or a barrister. Essentially, both solicitors and barristers practice law, however, which aspects of law they are allowed to practice differ. As compared to the attorney in the US who can engage in corporate transactions and also represent people in court, barristers are not allowed to do transactional legal work and are specialized in advocacy,<sup>200</sup> whereas solicitors are not allowed to plead before the higher levels of court but can do transactional work.<sup>201</sup> In Austria, the equivalent of a lawyer is the *Rechtsanwalt* (or for a female lawyer, *Rechtsanwältin*), and it is similar to that of a US

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<sup>200</sup> *What’s the difference between a Lawyer, a Solicitor and a Barrister?*, SLATER AND GORDON LAWYERS (Sep. 29, 2014), <http://www.slatergordon.co.uk/media-centre/blog/2014/09/difference-between-a-lawyer-a-solicitor-and-a-barrister-explained/> (last visited Jul. 14, 2016).

<sup>201</sup> *Id.*

attorney in terms of the legal services that he or she is allowed to provide. An attorney, a solicitor, a barrister and a *Rechtsanwalt* fall under the definition of ‘lawyer’ as they are all sanctioned and qualified to provide legal services under the law. However, how one becomes a lawyer and how lawyers are regulated in each jurisdiction differs. This will be discussed in the next few sections.

### 5.3.2.2 Regulation of lawyers in the US

State law governs the regulation of lawyers in the US; each state has its own bar association and its own set of rules governing the admission and regulation of lawyers/attorneys. For example, when comparing the requisite examinations that a candidate seeking admission to the bar must satisfy, the New York State Board of Law Examiners states that candidates must successfully complete the Uniform Bar Examination (“UBE”), the Multistate Professional Responsibility Examination (“MPRE”), and the New York Law Examination (“NYLE”);<sup>202</sup> whereas to be admitted to the Californian bar, a candidate must complete the Californian Bar Examination and the MPRE.<sup>203</sup> Furthermore, lawyers face restrictions when working across states – a New York lawyer must be qualified in California as well before he or she is allowed to practice law in that state. Some attorneys who have been previously qualified in one state may face lesser hurdles in qualifying to practice in another state, although this is dependent on

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<sup>202</sup> THE N.Y. STATE BD. OF L. EXAMINERS, *Uniform Bar Examination, New York Law Course & New York Law Bar Exam*, <http://www.nybarexam.org/UBE/UBE.html> (last visited June 19, 2016).

<sup>203</sup> See THE STATE BAR OF CAL., SUMMARY OF REQUIREMENTS FOR ADMISSION TO PRACTICE LAW IN CALIFORNIA, [http://admissions.calbar.ca.gov/Portals/4/documents/2015\\_SummaryofRequirements0314\\_R.pdf](http://admissions.calbar.ca.gov/Portals/4/documents/2015_SummaryofRequirements0314_R.pdf). The rules governing the admission to the Californian bar are found separately. See *Admission to Practice Law in California*, CAL. STATE BAR, <http://rules.calbar.ca.gov/LinkClick.aspx?fileticket=-2KV5j0w6Cw%3d&tabid=1227> (last visited Jul. 14, 2016).

whether the states in question have a reciprocity agreement and what are the conditions within the reciprocity agreement.<sup>204</sup>

A further analysis on the requirements to be admitted to the bar in one jurisdiction shows that a candidate needs to achieve several milestones before he or she can file for admission to practice as a qualified lawyer. Using the State of New York (the state which has the highest amount of registered practicing attorneys)<sup>205</sup> as an example, the candidate must be qualified to take the bar examination in the sense of having attained the satisfactory academic requirement or received an exemption from it,<sup>206</sup> after which, the candidate must pass the bar examination which comprises the UBE, MPRE and NYLE, complete the 50 hour pro bono requirement, and undergo an evaluation on his or her character and fitness, before being allowed to take an oath and thereby be sworn in as an attorney.<sup>207</sup> Although there is no practice training period needed for attorneys seeking for admission to the bar in the State of New York, the amount of money and time expended to fulfill the basic requirements to be eligible to take the bar examination is in itself a huge enough obstacle to overcome, i.e. the costs incurred in studying at a law school. This does not include bar exam courses offered by bar review courses<sup>208</sup> to prepare students for the bar exam, and other miscellaneous costs such as the software to enable

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<sup>204</sup> Each state has its own reciprocity agreements – this is also known as ‘Admission on Motion’. The American Bar Association has summarized such information into a chart. See NATIONAL CONFERENCE OF BAR EXAMINERS & AM. BAR ASS’N, COMPREHENSIVE GUIDE TO BAR ADMISSION REQUIREMENTS 2016 37 (Erica Moeser & Claire J. Guback eds. 1st ed. 2016) [*Chart 12: Reciprocity, Comity, and Attorney’s Exams*].

<sup>205</sup> AM. BAR ASS’N, ABA NATIONAL LAWYER POPULATION SURVEY (2016), [http://www.americanbar.org/content/dam/aba/administrative/market\\_research/national-lawyer-population-by-state-2006-2016.authcheckdam.pdf](http://www.americanbar.org/content/dam/aba/administrative/market_research/national-lawyer-population-by-state-2006-2016.authcheckdam.pdf).

<sup>206</sup> See *Bar Exam Eligibility*, THE N.Y. STATE BD. OF L. EXAMINERS, <http://www.nybarexam.org/Eligible/Eligibility.htm> (last visited Jul. 14, 2016).

<sup>207</sup> Part 520. Rules of the Court of Appeals for the Admission of Attorneys and Counselors at Law, State of N.Y.: Court of Appeals, §§520.1-520.18, <https://www.nycourts.gov/ctapps/520rules10.htm>.

<sup>208</sup> There are several bar review courses that are available in the market – while some students may choose to prepare for the bar exam without such courses, many students still elect to use a bar course to assist them with preparing for the bar exam. Such courses do not however come cheap and can easily cost thousands. See also BARBRI, <http://www.barbri.com> (last visited Jul. 14, 2016); *Complete Bar Review Course*, KAPLAN BAR REV., <https://www.kaptest.com/bar-exam/courses/complete-bar-review-course> (last visited Jul. 14, 2016).

examinees to use computers at the bar exam<sup>209</sup> – all of these add up to the gross total cost incurred to become a qualified attorney.

After admission, attorneys in the US are bound by legal ethics, and are expected to conduct their practice ethically according to these rules and regulations. Legal ethics refer to the set of professional and ethical duties and rules that admitted attorneys are obliged to adhere to, failing which, they may face sanction from the bar association and/or courts depending on the type of ethical duty breached. The enforcement of ethical codes and duties are conducted by each individual state, although the codes and duties appear to be rather consistent across states since almost every state in the US requires the attorney to pass the same legal ethics exam (i.e. the MPRE)<sup>210</sup> as a prerequisite to admission to the bar.<sup>211</sup> The duties that an attorney owe to the courts, their clients, and society as a whole are enshrined in the respective states' regulations governing qualified attorneys. The common duties that attorneys are under a duty to adhere to include that of the duty of confidentiality, the duty to act in the best interests of the client, the duty to uphold the proper administration of the courts, amongst several others.<sup>212</sup> Some codes of conduct further restrict the way in which an attorney can advertise his or his firm's services.<sup>213</sup> In

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<sup>209</sup> The New York State Bar Examination allows candidates to take the examination with a laptop instead of writing the examination by hand. See also N.Y. STATE BD. OF L. EXAMINERS, N.Y. STATE BAR INFO. GUIDE 5 (2016), <http://www.nybarexam.org/TheBar/NYBarExamInformationGuide.pdf>.

<sup>210</sup> *Multistate Professional Responsibility Examination*, NATIONAL CONFERENCE OF BAR EXAMINERS, <http://www.ncbex.org/exams/mpre/> (last visited Jul. 14, 2016).

<sup>211</sup> *Id.* All states save for Maryland, Wisconsin and Puerto Rico require attorney candidates to pass the Multistate Professional Responsibility Exam.

<sup>212</sup> Each state in the US has its own code of conduct – however, the American Bar Association has produced its model rules of professional conduct, which has been adopted in many states, such as that of California and New York. See *Model Rules of Professional Conduct: Table of Contents*, AM. BAR ASS'N, [http://www.americanbar.org/groups/professional\\_responsibility/publications/model\\_rules\\_of\\_professional\\_conduct/model\\_rules\\_of\\_professional\\_conduct\\_table\\_of\\_contents.html](http://www.americanbar.org/groups/professional_responsibility/publications/model_rules_of_professional_conduct/model_rules_of_professional_conduct_table_of_contents.html) (last visited Jul. 14, 2016); *Dates of Adoption*, AM. BAR ASS'N, [http://www.americanbar.org/groups/professional\\_responsibility/publications/model\\_rules\\_of\\_professional\\_conduct/chrono\\_list\\_state\\_adopting\\_model\\_rules.html](http://www.americanbar.org/groups/professional_responsibility/publications/model_rules_of_professional_conduct/chrono_list_state_adopting_model_rules.html) (last visited Jul. 14, 2016).

<sup>213</sup> The American Bar Association has provided much links, articles, and references on the subject of professionalism and ethics in lawyer advertising. See *Professionalism & Ethics in Lawyer Advertising*, AM. BAR ASS'N, [http://www.americanbar.org/groups/professional\\_responsibility/resources/professionalism/professionalism\\_ethics\\_in\\_lawyer\\_advertising.html](http://www.americanbar.org/groups/professional_responsibility/resources/professionalism/professionalism_ethics_in_lawyer_advertising.html) (last visited Jul. 14, 2016).

the event that an attorney breaches his duties towards the client, a client can lodge a complaint, and the attorney may be disciplined according to the respective state's rules governing disciplinary action.<sup>214</sup> In essence, US attorneys are required under law to undergo a tedious (and rather expensive) process to be admitted, after which, they remain tightly regulated by the respective bar associations and states via professional and legal ethics.

### 5.3.2.3 Regulation of lawyers in the UK

A lawyer in the UK can either refer to a solicitor or a barrister, and both types of lawyers are regulated differently. In layman terms, a solicitor is a “member of the legal profession qualified to deal with conveyancing, the drawing up of wills and other legal matters”,<sup>215</sup> whereas a barrister is a person who is “called to the bar and entitled to practice as an advocate”,<sup>216</sup> i.e. a person who is allowed to professionally plead in court.<sup>217</sup> While both professions are regulated differently in terms of requirements for admission, the general requirements are similar for both: a specific education, practical training, and the candidate successfully passing a set of exams. What differs then is the type of education required, the number of years of practical training, and the number and type of exams that a solicitor or barrister candidate is expected to complete. There are therefore many hoops

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<sup>214</sup> Should an attorney breach his professional and ethical duties, he or she may be subject to disciplinary action by the state bar association. For instance, the California state bar association has published in its front page a link to the discipline summaries of attorneys for the month of July, and has also stated that there were “two bay area attorneys [that have been] disbarred for collecting unearned fees”. See THE STATE BAR OF CAL., <http://www.calbar.ca.gov> (last visited Jul. 14, 2016). See also CAL. BAR JOURNAL, *Two Bay Area attorneys disbarred for collecting unearned fees* (Jul. 2016), <http://www.calbarjournal.com/July2016/AttorneyDiscipline/Feature.aspx>; *Disbarments*, CAL. BAR JOURNAL, <http://www.calbarjournal.com/July2016/AttorneyDiscipline/Disbarments.aspx> (last visited Jul. 14, 2016).

<sup>215</sup> *Solicitor*, OXFORD DICTIONARIES, <http://www.oxforddictionaries.com/definition/english/solicitor>.

<sup>216</sup> *Barrister*, OXFORD DICTIONARIES, <http://www.oxforddictionaries.com/definition/english/barrister>.

<sup>217</sup> *Advocate*, OXFORD DICTIONARIES, <http://www.oxforddictionaries.com/definition/english/advocate?q=Advocate>.

that a person must jump through before he or she can be a qualified lawyer to undertake ‘restricted legal services’ as per the UK Legal Services Act.<sup>218</sup>

Lawyers are similarly bound by professional ethics in the UK. The Solicitors Regulation Authority<sup>219</sup> is in charge of regulating professional ethics for solicitors, while the respective body for barristers is The Bar Standards Board.<sup>220</sup> The Solicitors Regulation Authority has produced the “SRA Code of Conduct”,<sup>221</sup> in which the ethical duties of a solicitor are enshrined, and similarly, the Bar Standards Board has published the equivalent of that, which is entitled “The Bar Standards Board Handbook”.<sup>222</sup> Both books contain numerous duties that a solicitor and barrister must adhere to, failing which, they may face sanction by their respective regulatory authorities. Some ethical duties that are similar across both professions include the proper administration of justice, the duty to act in the best interests of the client, the duty of confidentiality, and the duty to have honesty, integrity and independence, amongst others.<sup>223</sup> UK lawyers are also restricted in the way that they can advertise their services,<sup>224</sup> similar to their American counterparts. As evident, lawyers in the UK face the same situation as their US counterparts: a long duration before one becomes qualified to practice law, and many regulations governing practice after admission.

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<sup>218</sup> LEGAL SERVICES ACT, *supra* note 153, § 12-13.

<sup>219</sup> See also SOLICITORS REGULATION AUTHORITY, <http://www.sra.org.uk/> (last visited Jul. 14, 2016).

<sup>220</sup> See also BAR STANDARDS BOARD, <http://www.barstandardsboard.org.uk/> (last visited Jul. 14, 2016).

<sup>221</sup> SOLICITORS REGULATION AUTHORITY, *SRA Code of Conduct*, <http://www.sra.org.uk/solicitors/handbook/code/content.page> [hereinafter *SRA Code of Conduct*].

<sup>222</sup> THE BAR STANDARDS BOARD, *HANDBOOK* (1st ed. 2014), [https://www.barstandardsboard.org.uk/media/1553795/bsb\\_handbook\\_jan\\_2014.pdf](https://www.barstandardsboard.org.uk/media/1553795/bsb_handbook_jan_2014.pdf) [hereinafter *BSB Handbook*].

<sup>223</sup> *Id.* at 22; SRA CODE OF CONDUCT, *supra* note 221.

<sup>224</sup> SRA Code of Conduct, *supra* note 221, at Chapter 8: Publicity. See *Publicity*, SOLICITORS REGULATION AUTHORITY, <http://www.sra.org.uk/solicitors/handbook/code/part3/rule8/content.page> (last visited Jul. 14, 2016); BSB HANDBOOK, *supra* note 222, at 36-37.

#### 5.3.2.4 Regulation of lawyers in Austria

In Austria, a lawyer is known as a *Rechtsanwalt*, although the Austrian legal system does not distinguish between a solicitor and a barrister unlike the English legal system. Austrian law prescribes certain requirements that a candidate must fulfill in order to be admitted to the *Rechtsanwaltskammer*, or the professional body governing and representing lawyers, i.e. the Austrian version of the English bar. These requirements can be found in the statute governing the regulation of lawyers (*Rechtsanwaltsordnung*)<sup>225</sup> (“RAO”) as per § 1 RAO, such as: having an Austrian/EU citizenship or citizenship from a recognized country, completion of a study on Austrian law, practical training based on the legal requirements with regard to duration and time, successful completion of the bar examination, participation in the requisite training for trainee lawyers, and the taking out of a liability insurance.<sup>226</sup>

As seen from above, there are several steps that a candidate must fulfill before he or she can be admitted to the state bar association. To put this into perspective, the educational requirements provided under § 3 RAO include specific conditions such as at least four years of legal education comprising 240 ECTS credits,<sup>227</sup> and knowledge of several branches of Austrian, EU and international law. Furthermore, as per § 2 RAO, one requires a minimum combined working experience of five years at both a court and at a law firm before he or she satisfies the practice requirements. Accordingly, a student will need at least nine years (four years of full time studies plus five years of practical working experience) before he or she can become properly admitted as a lawyer. The process to

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<sup>225</sup> RAO, *supra* note 121.

<sup>226</sup> *Id.* § 1 ¶ 2.

<sup>227</sup> *Id.* § 3. ECTS is an abbreviation of the phrase ‘European Credit Transfer and Accumulation System’, and ECTS credits refers to the credit system that universities have adopted as part of the EU’s Bologna Process. See also EUROPEAN COMMISSION, *The Bologna Process and the European Higher Education Area*, [http://ec.europa.eu/education/policy/higher-education/bologna-process\\_en.htm](http://ec.europa.eu/education/policy/higher-education/bologna-process_en.htm) (last visited June 19, 2016).

become admitted as a lawyer is no doubt a lengthy one, and definitely requires a lot of investment in terms of time at least.

After admission or during the training period prior to admission, Austrian lawyers are subject to “numerous laws and obligations”<sup>228</sup>. Such laws and obligations are similar to the ethical duties that their American and English counterparts are bound to – similar rules include the duty of confidentiality (*Verschwiegenheitspflicht*),<sup>229</sup> the duty to prevent double representation or duty to prevent conflict of interests (*Verbot der Doppelvertretung*).<sup>230</sup> Austrian lawyers must be registered at a bar association (*Kanzleisitz*) before they are allowed to practice as a lawyer. While the regulation of lawyers is governed by Austrian federal law (i.e. the RAO), each state has its own separate bar association, e.g. the Viennese Chamber of Lawyers,<sup>231</sup> the Salzburg Chamber of Lawyers.<sup>232</sup>

#### 5.3.2.5 Harmonization of the legal profession in the EU

Although there is harmonization with regard to the legal profession in the EU, such harmonization is mainly based on the free movement of labor for lawyers and legal professionals. The Lawyers’ Services Directive<sup>233</sup> and the Lawyers’ Establishment Directive<sup>234</sup> generally deals with the admission of a lawyer from one member state to another member state, and a lawyer legally working in another member state. This harmonization process does not affect the requirements that a person must fulfill before

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<sup>228</sup> HELMUT ZIEHENSACK & RENÉ RUPRECHT, *BERUFS- UND STANDESRECHT DER RECHTSANWÄLTE* § 13 (4th ed. 2014).

<sup>229</sup> RAO, *supra* note 121, § 9 ¶ 2.

<sup>230</sup> *Id.* at § 10.

<sup>231</sup> RECHTSANWALTSKAMMER WIEN, <http://www.rakwien.at/> (last visited Jul. 13, 2016).

<sup>232</sup> SALZBURGER RECHTSANWALTSKAMMER, <http://www.srak.at> (last visited Jul. 13, 2016).

<sup>233</sup> Directive 98/5/EC of the European Parliament and of the Council of 16 February 1998 to facilitate practice of the profession of lawyer on a permanent basis in a Member State other than that in which the qualification was obtained [hereinafter *Lawyers’ Services Directive*].

<sup>234</sup> Council Directive 77/249/EEC of 22 March 1977 to facilitate the effective exercise by lawyers of freedom to provide services.

he or she can become admitted in his or her own home jurisdiction. However, a lawyer must be successfully called in a EU state, and be registered as a lawyer at his or her home Member State that he or she was admitted to the bar in, before he or she is allowed to port his title to another EU member state.<sup>235</sup> Thus, on top of being regulated in their home jurisdiction for the admission as a lawyer and practice of law, lawyers in the UK and Austria are required to meet the conditions listed in the aforementioned EU directives before being able to practice in another member state. While this improves mobility of lawyers across different jurisdictions, there is still a large difference in the degree of mobility of lawyers as compared to the accessibility CGC software. This difference in mobility will be later discussed at Part 7.1.

#### 5.3.2.6 Summary of the regulation of lawyers in all three jurisdictions

Lawyers in all three jurisdictions are regulated before and after admission. Although the educational and practice requirements differ in terms of duration for each country, it suffices to note that persons seeking admission to the bar associations in their respective countries are required to complete a substantial amount of education and pass one or several examinations. Furthermore, upon admission, lawyers in all three jurisdictions are subjected to professional and legal ethics. Some of these duties which are relevant here are: (1) duties owed to the court; (2) duties owed to the client (in particular the duty of confidentiality, the duty to act in the best interests of the client, and the duty to prevent conflicts of interest); and (3) duties surrounding the self-promotion or advertising of the lawyer or his or her law firm. These aforementioned duties will be of interest in the subsequent debates surrounding the issues arising from the difference in regulations for CGC software and lawyers, and will be discussed in the following sections.

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<sup>235</sup> See LAWYERS' SERVICES DIRECTIVE, *supra* note 234.

### **5.3.3 Issues Arising from the Differences in Regulations for Computer Generated Contract Software and Lawyers**

As can be seen from sections 5.3.1 and 5.3.2, CGC software and lawyers are regulated disparately. Most crucially, CGC software is much less strictly regulated as compared to lawyers, despite both providing the same services (theoretically) insofar where contract drafting is concerned. Developers of CGC software are not subject to legal ethics or codes of conduct, nor are their directors, employees or staff required to undergo a specific education before they can be allowed to start up a legal tech company dealing with CGC software. This leads to several conundrums, such as: (1) whether the regulations made for lawyers should be extended to CGC software; and (2) whether the regulations for lawyers should be amended in order to allow lawyers to compete effectively against CGC software. Such issues will be discussed subsequently at Part 7.1, after an analysis of the issues arising from the differences in regulations, which is as follows.

#### 5.3.3.1 Issues arising from the application of legal ethics to lawyers vis-à-vis CGC software

Firstly, several issues can be threshed out due to the differences in the regulation of lawyers (via legal ethics) and software (consumer protection and product liability). The US, UK and Austrian legal systems call upon their lawyers follow a set of rules governing professional ethics in the practice of law. However, CGC software and CGC software developers are not subject to the same kind of legal ethics as lawyers, such as the duty to act in the best interest of the client, the duty to prevent conflicts of interest, amongst several others. The consequences resulting from the lack of the imposition of legal ethics on software can be evaluated based on its effects on three different classes: (1) impact on the legal industry; (2) impact on consumers/clients; and (3) impact on society.

The many differences between the regulation of CGC software or software and lawyers have a profound impact on the legal industry. Firstly, CGC software companies are not subject to the same regulations in terms of marketing or advertising, unlike lawyers who are restricted in the way that they can market themselves. This could potentially increase CGC software companies' efficiency in broadening their customer base, or build their brand in a manner that law firms are unable to. Generally, lawyers are not allowed to misrepresent their services nor their identities, pursuant to the code of ethics governing the advertising or marketing of legal services by lawyers. Although CGC software companies can be made liable for misrepresentation of their services, the standard at which they are held to is much less as compared to lawyers. One other implication is that law firms may have to invest more money in hiring staff to verify and review all of the law firms' marketing materials often to ensure accuracy and truthfulness. While this does not mean that a CGC software company will be allowed to misrepresent its services and get away with it, the lower standard applied to CGC software companies as compared to law firms may spell out differences in terms of operation costs, as law firms have a higher standard to meet.

Another important point to note is the requirement of checking clients to ensure that the client is not using the services for immoral or illegal purposes – a lawyer may be under the obligation to do 'Know Your Client' checks and is under the duty to report illegal activity,<sup>236</sup> whereas an e-Commerce service provider (which legal tech companies can fall under) cannot be obliged to monitor data and illegal activity,<sup>237</sup> nor are CGC software companies expected to do so unlike lawyers. This also means that CGC software can save more on operation costs as they need not invest in software or staff to perform 'Know

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<sup>236</sup> In the UK, solicitors are required to do customer due diligence as part of anti-money laundering measures. See THE LAW SOCIETY, ANTI-MONEY LAUNDERING PRACTICE NOTE (2013), <http://www.lawsociety.org.uk/support-services/advice/practice-notes/aml/documents/aml-practice-note/>.

<sup>237</sup> E-COMMERCE DIRECTIVE, *supra* note 172, at art. 10.

Your Client' checks, which all law firms cannot avoid. Bearing these differences in mind, it seems that CGC software enjoys a better playing field by being able to operate at a lower cost due to the relatively fewer regulations or lower standard of obligations imposed on it for the same kind of work that it intends to compete against lawyers with.

The second notable impact of the difference in the regulations between CGC software and lawyers is that on consumers or clients. Such differences in regulations mean that consumers/clients will likely have more (or less) avenues of recourse as against a CGC software company. For example, if the CGC software comes up with a negligently drafted contract, the consumer may face difficulty trying to sue for damages for such a contract. However, if this contract is negligently drafted by a lawyer, the consumer may not only lodge a complaint against the lawyer, but also to the respective bar associations' board to have the lawyer sanctioned, or be compelled to ensure that the lawyer does not hand out shoddy work to his or her clients in the future. Another example would be the earlier scenario in which lawyers face tougher marketing regulations as compared to a CGC software company. The avenues for redress that a consumer has against the CGC software company is much less vis-à-vis the lawyer. The consumer has to enforce his rights in court if the CGC software company has misrepresented his services in the advertisement, and this may be a costly affair that can prove to be not economically viable. However, a client of a lawyer or law firm can either go to court, or complain to the relevant bar association about the lawyer's misrepresentation, as earlier explained. Therefore, a consumer who chooses a lawyer over CGC software is generally better protected in terms of consumer protection when a problem arises from the defective software, in the sense that the consumer has more legal avenues of redress.

Following from this point, consumers of such CGC software must also be mindful that CGC software companies are not subject to any duty of confidentiality, unlike lawyers.

Consumers of CGC software should then bear in mind that their data which they have provided to the CGC software is not protected by the same degree of confidentiality – or perhaps not even protected by any sort of confidentiality – although possible data protection laws on the use of such information may apply if the information given by the consumers can identify a living person.<sup>238</sup> Barring such regulations, the CGC software is generally not bound (unless so stated in the EULA) to protect the confidentiality of information provided by consumers, and in the event of leakage of such data, consumers may not have any recourse against the CGC software company, especially if the EULA covers such occasions and is enforceable against the consumer. This is very much unlike the case of a lawyer, where the consumer or client always has recourse due to the lawyer’s longstanding duty of confidentiality for its client – similar to professional negligence as a result of poor drafting, a lawyer can be disciplined for failing to adhere to the duty of confidentiality in all three jurisdictions.<sup>239</sup>

Lastly, the difference in regulations between CGC software and lawyers echo society’s belief that lawyers have a greater duty beyond that of attending to their clients’ mandates or lawsuits. The United Nations’ Basic Principles on the Role of Lawyers<sup>240</sup> provide that the ordinary person should have access to lawyers and legal services, and that governments must ensure that all persons must be informed of their right to have a lawyer

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<sup>238</sup> See also Data Protection Act, 1998, c. 29 (U.K.).

<sup>239</sup> In all three countries, lawyers owe a duty of confidentiality to their clients. The American Bar Association’s Model Rules of Professional Conduct provides for such a duty at Rule 1.6. See *Rule 1.6: Confidentiality of Information*, AM. BAR ASS’N, [http://www.americanbar.org/groups/professional\\_responsibility/publications/model\\_rules\\_of\\_professional\\_conduct/rule\\_1\\_6\\_confidentiality\\_of\\_information.html](http://www.americanbar.org/groups/professional_responsibility/publications/model_rules_of_professional_conduct/rule_1_6_confidentiality_of_information.html). Similarly, in the UK, barristers and solicitors are subject to the same duty of confidentiality. See BSB HANDBOOK, *supra* note 222, at 33; SRA CODE OF CONDUCT, *supra* note 221, at Chapter 4: Confidentiality and disclosure, <http://www.sra.org.uk/solicitors/handbook/code/part2/rule4/content.page>. In Austria, this duty of confidentiality is also known as *Verschwiegenheitspflicht*. See RAO, *supra* note 225, § 9 ¶ 2; ZIEHENSACK & RUPRECHT, *supra* note 228, at 16-19.

<sup>240</sup> U.N. Human Rights Office of the High Commissioner, Basic Principles on the Role of Lawyers (Sep. 7, 1990), <http://www.ohchr.org/EN/ProfessionalInterest/Pages/RoleOfLawyers.aspx>.

in criminal justice matters.<sup>241</sup> More crucially, lawyers are “essential agents of the administration of justice”.<sup>242</sup> The same transaction lawyer who drafts contracts has the same ethical duties as that of a criminal lawyer who drafts submissions – all of them are to ensure that justice is administered properly. However, this is not applicable for CGC software: CGC software, while having the potential to replace lawyers, is not required to ensure that justice is administered properly. While CGC software are not subject to such ethical obligations, it does not necessarily mean that altruistic aims are not met. One effect of software companies building CGC software could be that of enabling greater access of justice for the less privileged by providing cheaper alternatives for contracts as compared to before. Ultimately, society expects lawyers to uphold certain values and beliefs – even though this is not expected of CGC software, there is still some good impact that CGC software can bring about to society, if CGC software companies have this objective in mind when creating software.

#### 5.3.3.2 Barriers to entry for lawyers versus software

Another issue is the higher barrier to entry for lawyers as compared to CGC software, or legal tech in general, to compete in the same industry. As seen in Parts 5.3.2.2 to 5.3.2.4, the time needed for one to successfully become a lawyer is lengthy and costly – so much so that news sources have reported about how the law degree is expensive yet futile.<sup>243</sup> This is in stark contrast to CGC software, which has relatively less barriers to entry in terms of time. Although it is difficult to provide software estimation times for the development of software and legal tech, the industry has seen a huge growth in legal tech

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<sup>241</sup> *Id.*

<sup>242</sup> *Id.* at ¶12.

<sup>243</sup> Noam Scheiber, *An Expensive Law Degree, and No Place to Use It*, N.Y. TIMES, June 17, 2016, <http://www.nytimes.com/2016/06/19/business/dealbook/an-expensive-law-degree-and-no-place-to-use-it.html> (last visited June 18, 2016).

in recent years, and it is predicted to continue to grow at 30%<sup>244</sup> – the current interest and boom in legal tech may fuel more investors and more developers who may want to ride on this current and produce CGC software expediently to grab a part of the market share before another app or software does.

Considering the market predictions about the legal tech boom and how legal tech is likely to play a bigger role in the life of lawyers,<sup>245</sup> this growth spurt is unlikely to stop. The legal industry thus faces a situation where unregulated legal services can quickly enter the market without having to undergo the same stringent requirements of education, training or bar exams. Developers need not take a bar examination before they can be allowed to produce and release CGC software to the market. Furthermore, the borderless quality of legal tech enables such software or website companies to extend their reach beyond their own jurisdiction faster than a single lawyer – US companies such as LegalZoom have been able to provide targeted advertisements; if consumers from Austria visit LegalZoom’s website, the phrase “U.S. legal help for businesses and families in Austria” flashes across the company’s homepage.<sup>246</sup> Several academics, journalists and observers have further commented that the legal industry is thus facing a situation whereby lawyers are losing a greater chunk of the market share of the industry to not just corporate departments,<sup>247</sup> but also to legal tech. With such high barriers to entry for lawyers as compared to software or CGC software, should the barriers to entry for lawyers be then relaxed? Suggestions and opinions on this matter will be then later provided at Part 7.2.

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<sup>244</sup> THOMSON REUTERS LEGAL EXECUTIVE INST., HOW BIG IS THE U.S. LEGAL SERVICES MARKET? (2015), <http://legalexecutiveinstitute.com/wp-content/uploads/2016/01/How-Big-is-the-US-Legal-Services-Market.pdf> (last visited June 19, 2016).

<sup>245</sup> See VEITH, *supra* note 38. More recently an AI lawyer has also been launched into the market, namely ROSS Intelligence. Several law firms, such as Dentons and Latham & Watkins LLP, have already begun to use this technology. See ROSS Intelligence, <http://www.rossintelligence.com/> (last visited Oct. 13, 2016).

<sup>246</sup> LEGALZOOM, <http://www.legalzoom.com> (last visited June 18, 2016) [when visited in Austria].

<sup>247</sup> GEORGETOWN L. CTR. FOR THE STUDY OF THE LEGAL PROFESSION, 2016: REPORT ON THE STATE OF THE LEGAL MARKET (2016).

### 5.3.3.3 Other issues arising from the differences in the regulation of lawyers and CGC software

One other issue is that of the recourse by consumers against software. Previously, the discussion was focused on the matter that a consumer has better recourse against a lawyer versus a CGC software company. Here, the focus is on what are the possible recourses against the CGC software company if the consumer has received a negligently drafted contract. When a CGC software produces a CG contract that is wrongly drafted, the law is at present not developed enough to permit consumers of the legal service to sue the AI or software itself,<sup>248</sup> and thus the only recourse that the consumer has is against the developer. Whereas for a lawyer, should he or she provide negligent advice, the consumer's recourse is against the lawyer or the law firm. The consumer who uses a CGC software as compared to hiring a lawyer runs a greater risk of not being able to recover against the developer or lawyer respectively if the contract produced has been negligently drafted, since the lawyer is required by law to purchase professional liability insurance.

One method of resolving this is to compel legal tech developers to purchase liability insurance for their software, similar to lawyers having to take up professional liability insurance. While this may sound like a simple solution, software developers are most likely to include a long list of terms and conditions to absolve themselves from liability resulting from the use of their software to begin with, thereby rendering it difficult for consumers to even claim against them for negligent software. This also means that requiring CGC software companies to take up some sort of liability insurance to protect themselves is a moot decision. As there are at the moment no statutory rights that a consumer has against malfunctioning legal software or AI systems, consumers only have

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<sup>248</sup> Eran Kahana, *Abstract Conceptualization and IP Infringement by AI: Part II*, STAN. L. SCH.: CODEX, Apr. 14, 2016, <https://law.stanford.edu/2016/04/14/abstract-conceptualization-and-ip-infringement-by-ai-part-ii/> (last visited May 30, 2016).

# Consumer

seeks advice  
from / relies

a contractual or tortious (in the common law jurisdictions) right against the software

# Lawyer

developer. On the other hand, consumers do not only have a contractual right against

purchases /

lawyers, but can also use complain to the regulatory authority in the event the lawyer

breaches or her code of conduct generates lawyers, consumers thus run a greater risk

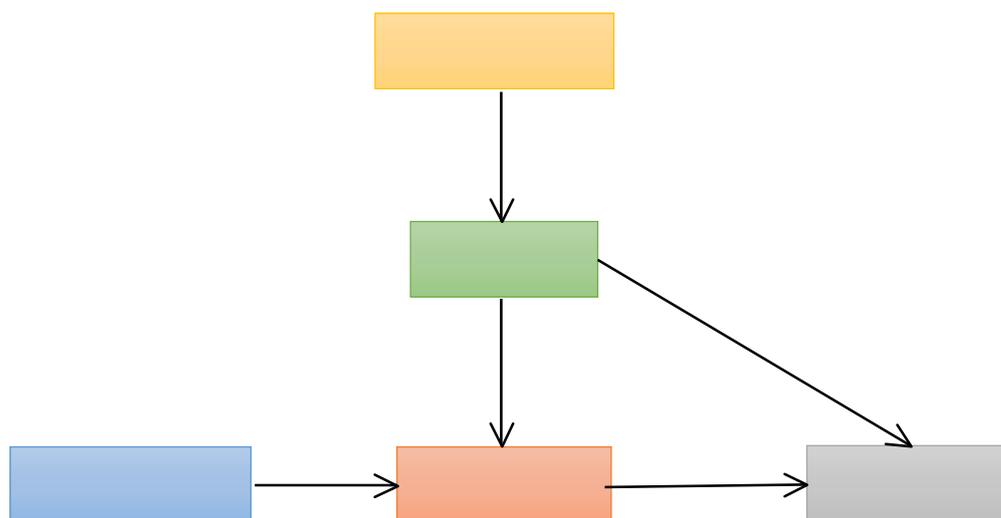
of having no recourse against the CGC software for negligently or poorly drafted and

unenforceable contractual terms.

## 5.4 What Happens when a Lawyer Uses a Computer Generated Contract

### Software?

In the previous few sections (i.e. from Parts 5.2 to 5.3), this paper covered the potential consequences that a consumer or business may face when using CG contracts and CGC software. While these entities may benefit from CG contracts or CGC software, lawyers can likewise use CGC software during the course of their business to their own advantage. This can be illustrated as follows:



Based on the diagram above, the analysis provided from Part 5.3.2 to 5.3.3 will not be as applicable here as the lawyer is not using the CGC software as a consumer. The lawyer

does not fall under the class of consumer because he or she is using the software as part of his or her course of business, and therefore will not be able to enjoy protection under consumer protection laws, as the use of the CGC software by a lawyer is likely to be treated as a B2B scenario rather than B2C since the lawyer is using the CGC. Flowing from this reasoning, lawyers who use CGC software cannot avail themselves to the same kind of consumer protection that consumers have,<sup>249</sup> although how much consumer protection a consumer has in the realm of software product is debatable to begin with.

Regardless, the CGC software has to declare the specifications of its software clearly (as per US and EU consumer protection rules) since these are obligations that CGC software companies must fulfill in any case, unless the CGC software is only targeted for lawyers to use. This situation would warrant a good re-evaluation since the B2B-only relationship means that CGC software companies could make an argument that they be absolved from having to provide software product details as per the EU Directive on Consumer Rights (which was discussed earlier in Part 5.3.1.3) since the lawyer is not a consumer per se. Even if this argument were to be made, it is advisable that CGC software companies still provide accurate product details of their software for both legal and business reasons – to prevent any allegations of misrepresentation of their service, and for instilling customer trust in their products, both of which can boost sales or downloads of the CGC software.

A lawyer may still choose to use CGC software so as to reduce costs in terms of time associated in the contract drafting process, while undertaking the risks if the interpretation of the contract becomes a subject of dispute. In fact, several legal tech companies are focusing their efforts in this area, such as Thomson Reuter's contract drafting assistant, although only time will tell whether lawyers will use a CGC software to generate contracts rather than draft on their own. Should lawyers then be allowed to plead that they

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<sup>249</sup> Since this will be seen as a B2B transaction, lawyers will not be afforded the same kind of consumer protection that consumers under a B2C transaction enjoys. The definition of a consumer can be found in the relevant consumer protection acts. See DIRECTIVE ON CONSUMER RIGHTS, *supra* note 126, at art. 2 ¶ 1.

should not be held liable if the AI system in the CGC software produces a negligently drafted or defective? Regardless of who or what drafts the contract, lawyers should remain responsible for any contract that they have drafted for their clients, even if this were a CG contract. A lawyer signs off under his own name when he forwards the engrossed CG contract to the client, and this gives the client the assurance that the lawyer has vetted and reviewed the contract, CG or otherwise. Tardiness or failing to counter check the CGC software's drafting is not an excuse; after all clients believe that they are still paying lawyers for their expertise. While AI systems are powerful, it is not to say that CGC software will produce a 100% accurate contract that perfectly mirrors the parties' intention. Lawyers should still double check their drafts before engrossing and forwarding them to the client. In this regard, lawyers can definitely benefit from the development of CGC software or contract drafting related software, even though they must ensure that whatever draft they have endorsed is properly drafted. The development of legal software is a double edged sword for legal practitioners – they compete with such technology and can benefit from such technology at the same time.

### ***5.5 Summary of Analysis***

The previous few sections show that there are several issues arising from the use of CG contracts and CGC software, such as general consumer protection and product liability rights, the application of legal ethics to lawyers vis-à-vis CGC software, the barriers to entry for lawyers versus software, the recourse by customers against lawyers as compared to lawyers, and lastly, the situation where the lawyer himself or herself is a consumer of the CGC software. The recommendations to tackle these issues will be subsequently discussed at Part 7, after this paper provides the economic and social impact of the use of

CGC software, which will thereby allow more balanced and holistic suggestions to solve these issues.

## **6 Economic and Social Impacts on the Use of Computer Generated Contracts and Computer Generated Contract Software**

Apart from the legal issues arising from the use of CGC software and CG contracts, there are likewise economic and social impacts. These impacts will be analyzed based on the impact it has on (1) individuals and businesses; and (2) the legal industry.

### ***6.1 Impact on Individuals and Businesses***

The development and flourishing of document automation software, or CGC software, can impact individuals and businesses in several ways. For small and medium sized enterprises (“SMEs”) who are cost sensitive and only need basic and standard partnership agreements, employment contracts, the use of such software can be beneficial so long as it is cheaper and faster than going to a lawyer to get a contract drafted. At present, there are already start-ups or legal tech companies that provide standardized contracts or document automation (i.e. preparation of standard form contracts) to consumers, either free<sup>250</sup> or at a fraction of the cost of hiring a lawyer. If developers manage to produce a CGC software that can create complex contracts, which are reliable and enforceable under the law, it will not be surprising if individuals and businesses elect to switch to using such software, especially if the costs are lower and they are willing to undertake the risk of having no lawyer’s advice on the matter.

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<sup>250</sup> PRINTABLE CONTRACTS, *supra* note 19.

From a macro perspective, the introduction of CGC software can serve as a tool to improve the access of justice to the average person. Some academics and commentators have noted that “one aim of legal tech is to improve access to justice and the legal system”<sup>251</sup> – in the case of CGC software, document automation or even the provision of free contract templates online for masses to use, the availability of low cost or near-free resources can help low-income persons who may need simple contracts drafted,<sup>252</sup> e.g. buying a second-hand motorcycle, tuition services, or personal coaching services. While the use of such software or websites may inadvertently run the risk of having no recourse against the developers (as seen earlier in Part 5.3.1.5), the poor has at least access to some legal resources – it then remains in the hands of the government to consider whether and how such legal resources should be regulated to prevent negligent legal advice or negligently drafted contracts.

## ***6.2 Impact on the Legal Industry***

The Legal Tech Report as published in 2016 envisioned that the legal tech industry will continue to grow, and predicted that lawyers will have to change their internal structure in order to stay relevant and compete in the economy.<sup>253</sup> The entrance of legal tech software such as contract generators or contract drafting tools only serves to reinforce the notion that while lawyers may stand to benefit from some of these technology, tech-savvy consumers may as well choose to bypass lawyers even if they could save more costs doing so, and the interface to produce such a CG contract is simple and user-friendly.

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<sup>251</sup> Micha Bues, *Access to Justice: Help Refugees with Legal Tech*, LEGAL TECH BLOG, Apr. 3, 2016, <http://legal-tech-blog.de/help-refugees-with-legal-tech> (last visited Jul. 10, 2016).

<sup>252</sup> *Simple Contract*, PRINTABLE CONTRACTS, [https://www.printablecontracts.com/Simple\\_Contract.php](https://www.printablecontracts.com/Simple_Contract.php) (last visited Jul. 10, 2016).

<sup>253</sup> VEITH, *supra* note 38, at 12-13.

Unless businesses are required to ensure that the counterparty signing the contract will be advised independently by a lawyer,<sup>254</sup> document automation software can pose as a credible threat as a competitor against lawyers in the contract drafting sector. Based on existing technology and the current state of affairs, developers of contract generators are targeting SMEs or start-ups that need to be conservative with their cash-flow and only need templates for simple or standard form contracts.<sup>255</sup> However, lawyers are most likely still often retained for complex deals that involve a huge quantum, several parties, or multiple jurisdictions; and in this regard, senior lawyers are unlikely to lose such business to AI contract drafting systems or document automation. Another reason for hiring lawyers to draft such contracts could be the fact that these lawyers serve another role in the deal, such as to negotiate with the counterparty on the relevant clauses to be added, removed or amended, so as to ensure that the deal is successful while sufficiently protecting their client's interests.

However, if document automation software continues to develop and artificial intelligence becomes advanced enough to autonomously produce computer-generated contracts, lawyers who are engaged to draft more complex contracts may be replaced by software. Papers on whether computers can negotiate and make contracts have been published in 1996,<sup>256</sup> and considering technological advancements these days, it would not be surprising if AI becomes sophisticated enough to not just draft, but also negotiate contracts in the future. Academics have already explored the possibility of eNegotiation systems that can operate on behalf of lawyers.<sup>257</sup> Add smart contracts into the equation,

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<sup>254</sup> As seen in the case of *Etridge No. 2*, English banks will have to ensure that wives or spouses guaranteeing their husband's loans have sought independent legal advice before signing the deed of guarantee, so as to render the guarantee enforceable. See *ETRIDGE NO. 2*, *supra* note 147.

<sup>255</sup> See *Start a Business*, DRAGON LAW, <https://dragonlaw.io/hkg/hkg/segment/starting-a-business/> (last visited Jul 7, 2016); LEGALZOOM, <http://www.legalzoom.com> (last visited Jul. 8, 2016).

<sup>256</sup> ALLEN & WIDDISON, *supra* note 14.

<sup>257</sup> See generally E. Thiessen, P. Minato & B. Hiebert, *ODR and eNegotiation*, 341-351, <http://www.mediate.com/pdf/thiessen.pdf> (last visited Oct. 13, 2016).

and legal firms may face the possibility of having to compete against software that can negotiate, draft and enforce a contract on their behalves.

While legal tech has been touted as having the ability to disrupt the legal industry as it can potentially replace lawyers and provides legal services at a cheaper price and faster time, it may still take some time before CGC software has the ability to replace lawyers completely. At present, while the state of AI and programming is developed enough to be able to produce basic contracts, much yet has to be seen for more complicated contracts that involve multiple parties, cross border negotiations or contracts that demand a high level of technicality. In order to achieve this goal, more research must be invested in this specific area of contract drafting. As previously mentioned, earlier in this paper, AI research has to be targeted to treat a specific problem, i.e. a CGC software used to generate construction contracts may have different algorithms or base codes as compared to a facilities agreement involving the pledging of company shares. From this, it appears that lawyers may not be overtaken by machines from their jobs in the near future.

However, ‘lawyers’ is a broad term that encapsulates senior partners, partners, senior associates and junior associates – if several processes such as proofreading, editing and ensuring consistency in contract drafting have already been provided for by legal tech software such as Thomson Reuters’ Drafting Assistant, which increases efficiency by claiming to save 61% of time for proofreading one’s own documents,<sup>258</sup> then junior associates may actually face a high chance of becoming redundant due to legal tech.<sup>259</sup> In this regard, several consulting groups, lawyers and commentators have discussed the impact of such legal tech for law firms. For instance, the Boston Consulting Group in its Legal Tech Report has reported that law firms may undergo a structural change, where

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<sup>258</sup> THOMSON REUTERS, *supra* note 4.

<sup>259</sup> See also *Associate Insight: The Death of Proofreading?*, MANAGING PARTNER, Feb. 12, 2015, <http://www.managingpartner.com/feature/technology/associate-insight-death-proofreading> (last visited Jul. 11, 2016).

there will be less junior associates and greater support staff in the firm's IT department.<sup>260</sup> This may allow firms to implement software and exploit the greater efficiency that comes with the use of software, such as Thomson Reuters' Drafting Assistant to proofread the agreements and Clausehound to check whether there are any lacunas in the contract, as a greater amount of IT support staff will be able to deal with and manage the growing amount of legal tech used by the firm. More fundamentally, the hourly billing system for work done by lawyers will have to be rethought in a world where there are other legal service providers that can provide the same service at a faster time and at a huge fraction of the cost. Academics and commentators on the subject have thus emphasized that law firms, both big and small, will need to address the billing mechanism so as to ensure that they can keep afloat.<sup>261</sup>

### ***6.3 Computer Ethics: Some Concerns***

While the topic of ethical issues surrounding the use of AI or intelligent machines is not within the scope of this thesis, it is still pertinent to highlight the issue of the ethical use of AI, technology and software for completeness. Computer ethics revolves around how software developers or computing professionals make decisions that are in line with professional, moral and social conduct. Certain associations such as the Association for Computing Machinery have their own Code of Ethics and Professional Conduct that applies to its members.<sup>262</sup> However, unlike lawyers, these ethical codes created by computer associations are not enforced on software developers (or in this case, CGC software developers) in the same manner as lawyers. In a sense, this topic is related but distinct to the issues as discussed in Part 5.3.3.1 surrounding the regulations of CGC

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<sup>260</sup> VEITH, *supra* note 38, at 10.

<sup>261</sup> *Id.* at 12-13. See also RICHARD SUSSKIND, TOMORROW'S LAWYERS (2013).

<sup>262</sup> *ACM Code of Ethics and Professional Conduct*, ASS'N FOR COMPUTING MACHINERY (Oct. 16, 1992) <https://www.acm.org/about-acm/acm-code-of-ethics-and-professional-conduct> (last visited Jul. 10, 2016).

software vis-à-vis professional ethics regulations by lawyers. Then, the focus was on the differences in the regulations of lawyers in the form of legal ethics, as compared to the lack of similar sorts of regulations on software developers, and whether the regulations for lawyers should apply similarly to CGC software services. The subject here however is rather focused on the existence of computer ethics for software developers and whether developers should be obliged to act ethically in the creation of the CGC software.

The topic of computer ethics and its implementation or co-existence with legal tech and CGC software is a wide one, and one such concern is the “policy vacuums created by computer technology”.<sup>263</sup> Apart from lacunas in policy, there are further concerns such as developing or designing software that can exploit the weaknesses in the user’s mind. In his article on Medium, Tristan Harris listed down “hijacks” made by product designers that “play[s] your psychological vulnerabilities (consciously and unconsciously) against you in the race to grab your attention”.<sup>264</sup> Applying this to legal tech and CGC software, and in light of how CGC software appears to be a solution for greater accessibility to justice for the poor, how should CGC software developers respond to such ethical concerns? What are the policy lacunas created by the introduction of CGC software, and how should one address them properly? Furthermore, should governments step in to enforce computer ethics for CGC software considering its potential impact as a tool to increase greater accessibility to justice, so as to prevent CGC software developers to take advantage of “psychological vulnerabilities”, and if so, how? Many of these questions concern computer ethics, policy and CGC software, which is not within the scope of this thesis, which is the impact of artificial intelligence in contract drafting. However, these

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<sup>263</sup> Deborah G. Johnson, *Computer Ethics*, 65 THE BLACKWELL GUIDE TO THE PHILOSOPHY OF COMPUTING AND INFORMATION 66 (Luciano Floridi ed., 1 ed. 2004).

<sup>264</sup> Tristan Harris, *How Technology Hijacks Peoples’ Minds from a Magician and Google’s Design Ethicist*, <https://medium.com/swlh/how-technology-hijacks-peoples-minds-from-a-magician-and-google-s-design-ethicist-56d62ef5edf3#.1wx2s0wem> (last visited June 20, 2016).

issues should, if not debated, be highlighted, as it is relevant to constructing an ethical and moral society for the better of mankind.

## **7 Suggestions and Opinions on the Use of Computer Generated Contracts and Computer Generated Contract Software**

After having evaluated the technical possibilities of CGC software, the legal consequences of using CG contracts and software, and the impact CGC software has economically and socially, should CGC software and CG contracts be used, promoted, regulated, or all of the above? Bearing in mind facts such as the rapid growth of legal tech in recent years, the predictions by academics, consulting groups and observers about the state of the legal industry, and investor interest in legal tech, law firms will have to change in order to prevent “being sidelined by more forward-thinking vendors”,<sup>265</sup> which can either be law firms or legal tech vendors.<sup>266</sup> While the present state of AI is still not sophisticated enough to generate complicated contracts, it would not be surprising if such would become a reality in the future, considering the advancements and research in AI. From the aforementioned sections, it is evident that there are several issues arising from the differences in the regulation of CGC software and lawyers. Suggestions and opinions on how to face the potential onslaught of CGC software and legal tech developments will be discussed in the subsequent paragraphs.

### ***7.1 Greater Harmony of Laws across States for the Mobility of Lawyers?***

As previously discussed at Part 5.3.3.2, lawyers are relatively more immobile as compared to their software counterparts when it comes to moving across jurisdictions to

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<sup>265</sup> VEITH, *supra* note 38, at 13.

<sup>266</sup> *Id.*

take on legal work. If member states have a strong interest in ensuring that their lawyers are able to compete better with the ubiquitous nature of software, one possible way is to consider methods that will render it easier for lawyers to practice in other states (US) or member states (EU). This can be done with a two-pronged approach. The first prong involves harmonizing laws across states, so that there are less differences in the interpretation and practice of law across states. For the US, this involves legislating federal statutes to consolidate state laws, and for the EU, introducing more EU regulations or directives and getting member states to adopt them. The second prong involves reducing the number of obstacles the lawyer must endure before being allowed to practice in another state.

However, either limb of the approach as aforementioned may be difficult to implement in practice. Firstly, in the US, harmonizing laws across states by introducing a federal statute may prove to be extremely difficult, depending on the stakeholders involved in the bill for discussion. Passing of the federal legislation requires much political willpower, and there also exists the possibility of having to deal with state resistance towards federal law encroaching areas where states traditionally have control over. As for the EU, while the EU has continuously made efforts to harmonize laws across member states, getting laws to be harmonized can easily take many years before the final regulation or directive is adopted or implemented by member states. Essentially, this is an idea that is theoretically beautiful but can be practically unfeasible.

For the second limb of the approach, this is a viable approach but one that must be executed in a prudent manner after much research. Firstly, how does one reduce the number of obstacles a lawyer must go through before being allowed to practice in another state? Does removing the need to take bar conversion courses help to improve this? However, by removing the need for a bar conversion course, how can, say, the New York

State Bar Association ensure that lawyers registered at the Californian Bar Association provide non-negligent legal advice on New York law, if these lawyers were to move east from California to work in New York? In the US, this is not as flexible since lawyers from one state must still pass a set of laws and regulations before being allowed to practice in another state. However, this may prove to be challenging considering the historical setting of federal-state autonomy, and the different types of laws across states. As for the EU, while there is much reform on the movement of lawyers in the single market as per the freedom of movement, a lawyer must still fulfill several conditions, such as that of being qualified to practice in one EU member state at least, before he or she can benefit from the directive concerning the freedom of movement of lawyers. In either scenario, lawyers do not have the kind of flexibility to practice cross-border, as compared to legal software, which is readily accessible for consumers online, and almost anytime. In this case, a more uniform administration in allowing lawyers to practice may be desired, although it is difficult to ascertain whether legislators in the US and EU would allow this, and whether this would allow lawyers to match up with the same mobility that is afforded to software. However, more research must be conducted in this area to estimate whether these variables should be adjusted to allow lawyers to cross borders with less hurdles. The decision to adjust the number of conditions a lawyer must meet before he is permitted to practice in another state so as to increase their mobility across states has to be weighed with the public policy of ensuring that lawyers do not provide negligent legal advice to the public in the other state.

## ***7.2 Equalizing the Playing Field for Lawyers and Computer Generated Contract Software?***

As it presently stands, CGC software is much more loosely regulated as compared to lawyers. In addition, consumers that use CGC software or software in general have lesser protection as compared to using a lawyer's services, in the sense of legal recourse in the case of a negligently drafted contract. There are therefore several ways to proceed: to ensure that CGC software is either more, equally, or less tightly regulated than lawyers, or to maintain the status quo.

This then leads to a more interesting question: should the barriers to entry for lawyers be relaxed? This is a difficult question to answer. It is highly debatable whether relaxing such requirements (i.e. requirements to be a qualified lawyer and legal ethic duties) would make them better equipped to compete in the market against legal tech, while not comprising on the need to ensure that lawyers provide non-negligent services to their clients. If the main reason for amending the regulations for lawyers is to make it easier for lawyers to qualify and therefore compete with disruptive technology such as CGC software, this may not be the best approach to proceed with. Every industry is prone to disruption by technology, and those that fail to keep up or evolve with it will be replaced. For example, in the photography industry, companies that used to dominate the photography industry by producing film were eventually replaced with the digital camera by the turn of the 21<sup>st</sup> century; this still serves as a poignant case study for business schools studying the potential disruptive ability of technology and how to manage digital transformation.<sup>267</sup> As much as this is disheartening for such companies, such is however reality and a sign of continuing progress of technology and humankind. In this case,

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<sup>267</sup> Scott Anthony, *Kodak's Downfall Wasn't About Technology*, HARV. BUS. REV., Jul. 15, 2016, [https://hbr.org/2016/07/kodaks-downfall-wasnt-about-technology?utm\\_campaign=HBR&utm\\_source=linkedin&utm\\_medium=social](https://hbr.org/2016/07/kodaks-downfall-wasnt-about-technology?utm_campaign=HBR&utm_source=linkedin&utm_medium=social) (last visited Oct. 10, 2016).

lawyers should find a way to adapt and thrive with such disruptive technology that is creeping into their market share of the legal industry, especially if society deems that such education and practice requirements are still important in guaranteeing good lawyers. A reduction in the number of regulations that lawyers face should not be effected so as to increase lawyers' competitiveness vis-à-vis legal tech companies, but rather as a result of the changing needs and views of society.

However, this does not mean that CGC software should go completely unregulated. Considering the state of laws and regulations concerning software, and the important functions that CGC software or legal tech software may replace in the future, some regulations should be implemented to ensure that consumers are better protected. Regulations should be targeted on not just CGC software, but legal technology as a group. This is nonetheless complicated. Legal technology encompasses many various types of software, such as online dispute resolution platforms, e-discovery software, and even predictions based on big data on the probability of a particular attorney winning against a judge.<sup>268</sup> Any regulation concerning legal tech or legal software must take into account the various permutations and combinations that can occur, and must likewise consider public policy concerns such as encouraging software companies to continue to innovate and produce cutting-edge technology that can benefit consumers and businesses alike. Finally, how such laws should be implemented – on a federal/EU or state/member state level – should also be further explored. In general, harmonization of such laws is preferable especially for the EU, in light of the EU's single market. However, whether this may be implemented and how long it will take to be implemented is rather uncertain since the legal industry, apart from the movement of lawyers across member states, is still mostly regulated by member states themselves. Hence, as much as there is a need for

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<sup>268</sup> PREMONITION, <http://premonition.ai/> (last visited Jul. 10, 2016).

greater consumer protection, countries must be aware of any blanket implementation of rules and regulations that could deter software companies from innovating and producing better products for society.

### ***7.3 The Importance of Education***

Apart from policies regulating law firms and legal services, there is another aspect that must be discussed: education. Lawyers face competition from legal tech, and while states debate about the public policy concerns in regulating lawyers, steps can be taken to ensure that lawyers can compete with CGC software, or legal tech for that matter. One such step is that of education. Education is important, and in this modern world where technology is a trendsetter and an industry disrupter, knowledge becomes obsolete quickly.<sup>269</sup> Students not only need to learn relevant skills that allow them to practice successfully, but also need to have the ability to relearn skills and knowledge.<sup>270</sup>

Legal education, even today, has been focused on providing students with an understanding of the large areas of law, e.g. constitutional law, public law, contract law, tort law, law of obligations, criminal law. Considering the industry's predictions on the fate of junior associates,<sup>271</sup> universities may wish to consider restructuring their curriculum to include an introduction into legal tech or a practical course on the use of certain legal tech software, so as to allow students to be cognizant of the rapidly changing modern world. The introduction of legal tech courses in the early stage of a student's legal studies may broaden their exposure on the existence of legal tech and the possibilities on the use of such legal tech, while also equipping him or her with the relevant skills at work. One possibility could involve ensuring that as part of the educational requirements, students are equipped with sufficient knowledge on operating

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<sup>269</sup> *Re-educating Rita*, *supra* note 1, at 10.

<sup>270</sup> *Id.*

<sup>271</sup> *Id.* at 10-11.

legal tech or legal informatics. If the Legal Tech Report is indeed true in pointing out that there will be a shift of jobs and law firms would require more legal informatics or IT-trained staff in its day-to-day operations rather than junior associates,<sup>272</sup> then law schools could offer combined programs in computer science and law in the J.D. or LL.B. courses so as to equip students with not just relevant knowledge, but also an alternate career path if they are unable to get a job as a junior associate due to shifting market trends. This can be a catalyst for students who are interested in pursuing legal informatics subsequently at graduate school, or developing a legal tech company during or after his or her education. Furthermore, if law schools subscribe to the pedagogical theory that universities are important in training students to enter the workforce, then more emphasis should be placed on operating legal tech or conducting research using online databases to search case law or commentaries, rather than only knowing how to look up a book at the library. Some universities have also stepped up their efforts in introducing legal tech earlier to their students by offering classes on various aspects of legal technology. The University of Vienna in Austria offers classes on legal informatics,<sup>273</sup> and in the US, Vanderbilt Law School has a course on technology in legal practice, where students will design “a legal application to solve an issue”.<sup>274</sup> These courses can then help to build awareness amongst law students of the importance and relevance of technology in the business and practice of law.

Education need not stop after law schools. Bar associations can offer such courses as well, and may incentivize lawyers by allowing such programs to be recognized as

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<sup>272</sup> VEITH, *supra* note 38.

<sup>273</sup> ARBEITSGRUPPE RECHTSINFORMATIK – AO. UNIV.-PROF. MAG. DDR. ERICH SCHWEIGHOFER, <https://rechtsinformatik.univie.ac.at/> (last visited Oct. 5, 2016).

<sup>274</sup> *Course Information: Technology in Legal Practice*, VANDERBILT L. SCH., <https://law.vanderbilt.edu/courses/340> (last visited Oct. 5, 2016).

continuing legal studies as part of an admitted lawyer's training requirements.<sup>275</sup> One interesting way to do so could be in the form of Massive Open Online Courses ("MOOCs") – bar associations, similar to Google or Facebook, could team up with a MOOC operator such as Udacity<sup>276</sup> or Coursera<sup>277</sup> to provide MOOCs for lawyers. Flowing from this, law schools and bar associations can consider alternative education paths, and also constantly be cognizant of the trends in the legal industry so as to better equip their students when they enter the workforce, and to prevent existing lawyers from being outpaced by technology respectively.

One interesting example would be the Paris Bar Association's L'Incubateur. L'Incubateur is a part of the Paris Bar Association that is tasked with spearheading the legal technology scene. They do so in two ways: firstly, by encouraging innovation in the legal field by offering an annual prize for the most innovative legal technology project (*L'Incubateur de Projets*),<sup>278</sup> and next, by reflecting on the "developments and reforms which must be initiated with the goal of rendering the profession more competitive".<sup>279</sup> L'Incubateur's work stretches further; in 2015, L'Incubateur worked with Sciences Po to deliver a paper entitled *The Innovation in the Legal Profession (L'Innovation dans la profession d'avocat)*.<sup>280</sup> Such joint projects help to further map out the legal industry, which can help to "develop an ecosystem favorable to innovation".<sup>281</sup> The growing awareness of legal technology and building of an ecosystem for legal innovation may eventually convince

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<sup>275</sup> See *Mandatory CLE*, AM. BAR ASS'N, [https://www.americanbar.org/cle/mandatory\\_cle.html](https://www.americanbar.org/cle/mandatory_cle.html) (last visited Jul. 10, 2016).

<sup>276</sup> Udacity provides several free courses and also allows students to undertake "nanodegrees" in certain fields. See UDACITY, <https://www.udacity.com/> (last visited Jul. 10, 2016).

<sup>277</sup> Coursera offers many different courses from varying disciplines online; its website states: "Take the world's best courses, online". COURSERA, <https://www.coursera.org/> (last visited Jul. 10, 2016).

<sup>278</sup> *Projet*, L'INCUBATEUR DU BARREAU DE PARIS, <http://incubateur-barreaudeparis.com/incubateur-2/le-projet/> (last visited Oct. 5, 2016).

<sup>279</sup> *Id.*

<sup>280</sup> SCIENCES PO ÉCOLE DE DROIT & L'INCUBATEUR DU BARREAU DE PARIS, L'INNOVATION DANS LA PROFESSION D'AVOCAT (Dec. 2016), [http://www.sciencespo.fr/ecole-de-droit/sites/sciencespo.fr.ecole-de-droit/files/IBP%20Rapport%20Innovation\\_decembre2015\\_0.pdf](http://www.sciencespo.fr/ecole-de-droit/sites/sciencespo.fr.ecole-de-droit/files/IBP%20Rapport%20Innovation_decembre2015_0.pdf).

<sup>281</sup> *Id.* at 19.

other universities, bar associations or concerned institutions to create degree programs or professional courses to allow students or current practicing lawyers to come back to pick up new skills. This belief of continuous education thus echoes the adage that one should “learn as if you were to live forever”.<sup>282</sup>

## **8 The 21<sup>st</sup> Century and Beyond: Man versus Machine or Man with Machine?**

What should we expect from AI and CG contracts, and how would this play out in our lives? The legal industry is said to be undergoing a ‘disruption’ due to technology, and as previously mentioned at the introduction, several commentators have stated that the legal industry is ‘ripe for uberization’.<sup>283</sup> At present, the state of AI and programming is developed enough to be able to produce rudimentary contracts – much yet has to be seen for more complicated contracts that involve multiple parties, cross border negotiations or contracts that demand a high level of technicality. This should however be caveated with the fact that several contract drafting skills such as proofreading, cross-checking defined terms have since been capable of execution by software.<sup>284</sup>

While more senior lawyers may have some breathing space before legal tech catches up with them in the domain of contract drafting, junior lawyers appear to be the victims of this clash between man and machine: much of their jobs are slowly being taken away by software that is most likely cheaper to use, and which probably operates at a greater efficiency as compared to manual typing or checking.<sup>285</sup> Lawyers that have a majority of their income being derived from executing standard form contracts run a risk of being

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<sup>282</sup> This quote has been widely attributed to Mahatma Gandhi.

<sup>283</sup> MICHAEL SKAPINKER, *supra* note 3.

<sup>284</sup> THOMSON REUTERS, *supra* note 4.

<sup>285</sup> *Id.*

replaced too. What this means is that lawyers must learn to innovate, and be able to add value to their services that machines cannot compete at. For the next generation of lawyers, the growth of contract drafting related software means that they may face an employment issue, i.e. that of smaller demand in a saturated market (especially in the US and the UK). This is a challenge that the legal industry must face and hopefully overcome, if it wishes to survive technological disruption.

From a societal point of view, the development of CGC software is a good thing. After all, the progression of humankind has always been premised on the growth of technology, and with greater mobility, connection and exchange of ideas in the 21<sup>st</sup> Century, people may produce cheaper, useful, efficient and reliable products for the legal industry – society then benefits as a whole. What we must however safeguard ourselves against is the abuse of legal tech and/or CGC software, and we instill the importance of ethics in the development and production of such software. As much as we desire legal services to be effected in a cheaper and faster manner, we must not lose our morality in pursuing so. Ultimately, legal tech and CGC software is here to stay, and will most likely be continuously developed everywhere. This trend of using CGC software is not just seen in the US and EU, but across the globe as well – in Singapore, Vanilla Law helps SMEs create “legal contracts in minutes with professional input from lawyers”,<sup>286</sup> and for companies that target a wider Asian market, Dragon Law provides *prêt-à-porter* agreements for SMEs to use when setting up their businesses.<sup>287</sup> The legal industry must learn to cope with this, and may even embrace it by integrating it into its practice, perhaps similar to what Vanilla Law has done – by first offering self-help via software at a low cost, and thereafter providing professional human legal advice later on the client’s CG contract.

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<sup>286</sup> VANILLA LAW, <http://www.vanillalaw.com.sg> (last visited Jul. 7, 2016).

<sup>287</sup> DRAGON LAW, *supra* note 255.

However, experts in the industry have noted that there is still “very little data available about legal technology as it is being deployed today”.<sup>288</sup> As researchers at CodeX attempt to “map the legal tech landscape”,<sup>289</sup> lawyers employed in law firms – big or small – need to be conscious about the developments around them. This applies to contract drafting as well. While it is still a field that requires much human input and calibration, it is not immune to technology. Considering the increased awareness of smart contracts, growth of contract drafting and execution tools, the lawyer’s monopoly over contract drafting may slowly erode. As an ending note, it is thus apt to point out this possible scenario for the future: while not everyone can be a great drafter, but a great drafter can come from anywhere<sup>290</sup> – perhaps even from a set of algorithms developed by man.

+++++ END +++++

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<sup>288</sup> Roland Vogl, *The Coming of Age of Legal Technology*, STAN. L. SCH.: CODEX (Sep. 26, 2016), <https://law.stanford.edu/2016/09/26/roland-vogl-the-coming-of-age-of-legal-technology/> (last visited Oct. 5, 2016).

<sup>289</sup> *Id.*

<sup>290</sup> This is a reference to the movie *Ratatouille* by Disney; the original quote was made by the character Anton Ego, where he went “... not everyone can be a great artist, but a great artist can come from anywhere”. See also RATATOUILLE (Pixar Animation Studios 2007).

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