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Preventing disputes: preventive logic, law & technology

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Chapter 9

Reflections on iContracts

The present, final chapter provides our reflections on the thesis. Together with an explanation and an application to a case study, they will serve as additional instructive material for the future use of iContracts. The purpose is to address a specific question that surfaced during a progress evaluation of the written material with experts from different disciplines. The main question then was: *how does a modern legal professional apply the lessons derived from this research in practice?* The chapter is meant to provide insight into the practical application of the results of iContracts research for non-experts in legal technology.

Below, we will discuss five reflections of different nature. We start providing a reflection statement on the method that can be used to analyse risk in legal cases (see 9.1). Then, we show the application area of the method and its potential for non-legal experts (in 9.2). Thereafter, we reflect on the relevance of the method for contract templates by explaining how it relates with legal text improvement (see 9.3). Subsequently, we reflect on the protection of privacy (in 9.4). Finally, we show the relevance of the research for workflow automation (see 9.5). We close the chapter by a Coda (in 9.6).

All in all, we apply the five reflections on a practical case study. The case study concerns the daily practice of a fictional lawyer, Michelle, who works in the offices of a law firm at the Zuidas, Amsterdam. She just became responsible for a new case in which American contract law played a role. In this case, Michelle's client, Andy, is asked to deliver a website to a third party who promised to pay Andy only after he had delivered the website.

9.1 Legal Risk Analysis

Reflection 1 reads as follows.

Reflection 1: *The Bow-Tie Method can be used to **analyse** risk in legal cases*

The Bow-Tie Method, and EBTO as its ontological extension, can be used by legal experts to analyse risk for legal cases (see Chapter 3). For every time a legal expert encounters a legal case, legal risk is inherently involved. Two of the main roles of a legal expert in legal cases are (1) to help the stakeholders achieve their desired objectives and (2) to manage potentially hidden and visible legal risks which the stakeholders may be facing in their attempt to achieve the objective. In our case study, Michelle will use the Bow-Tie Method to analyse the risk in the legal case under examination. Below we see how.

Under the rules of American Contract Law, the enforceability of a contract requires the fulfilment of three criteria: (1) the *offer*, (2) the *acceptance*, and (3) the *consideration* [Knapp et al., 2015]. Here we remark that there exists a related rule which allows for an offer to be revoked any time prior to acceptance [American Law Institute, 1981]. Moreover, there is a further distinction between contracts in which (a) a *promise* is exchanged for *performance* (*unilateral* contract: promise leads to contract) and (b) a *promise* is exchanged for a *promise* (*bilateral* contract: promise leads to (another) promise) [Knapp et al., 1971]. An issue that may arise in American Contract Law is the *circumstance* in which (1) one party makes an offer for a Unilateral Contract, while (2) the other party has stated to perform the task specified by the offer. The issue is if the offeror attempts to revoke the offer prior to the completion of the task by the offeree [American Law Institute, 1981]. Under *traditional* contract rules such a revocation is *effective*, meaning that (1) the offer that is being made is no longer capable of being accepted and (2) may face substantial costs. However, the offeree may also suffer from unexpected substantial costs. In a unilateral contract, *consideration* is one of the necessary conditions for enforcement. In fact, the full performance will be identical to (a) the completion of the performance and (b) the acceptance [American Law Institute, 1981]. So, the completion of performance plays two roles: *consideration* and *acceptance*. If there is no completion, a contract has not been accepted and there is no consideration to the offeror [American Law Institute, 1981].

The risk in unilateral contracts lies with the offeree, who incurs performance costs without securing the offer. An alternative to secure the offer is to make a counter-offer for a bilateral contract, if not desiring the flexibility by wanting to perform instead of being bound by performance. Depending on the interests

of the contracting party, the offeree may choose for a unilateral or bilateral contract. It is a balancing act between *flexibility* (unilateral) or *security* (bilateral). Such balancing act comes into play as a *risk-trade off*, where the offeree is tasked with deciding on the prevention measure.

In a unilateral contract, 'If an act is requested, that very act, and no other, must be given.' [Williston, 2024]. 'In case of offers for a consideration, the performance of the consideration is always deemed a condition.' [Langdell, 1880]. It is elementary that any offer to enter into a unilateral contract may be withdrawn before the act requested to be done has been performed. [Williston, 2024, Langdell, 1880, Offord v. Davies, 1862]. The offer of a reward in consideration of an act to be performed is revocable before the very act requested has been done [Shuey v. United States, 1875, Biggers v. Owen, 1888, Fitch v. Snedaker, 1868, Petterson v. Pattberg, 1928]. In a later revision of the rules for unilateral contracts, partial performance entitles the offeree to complete the performance [American Law Institute, 1981]¹. In any jurisdiction that does not accept this revision of the classical rules for offer and acceptance of a unilateral contract, the offeree runs a substantial risk of revocation before completion of the performance even after substantial performance costs have been incurred. Under the Classical rules for offer and acceptance, an offeree who was unhappy with such a risk could make a counter-offer for a bilateral contract, or could propose an option contract. It is a balancing act between flexibility (unilateral) or security (bilateral).

Such balancing act comes into play as a risk-trade off, where the offeree is tasked with deciding on the prevention measure. There are times that the offeree does not want to be bound by security, e.g., when the offeree is not certain about whether (s)he wants the contract or not. Yet, what the offeree certainly wants is freedom to try out and stop if (s)he does not want to complete it. Such a stopping may happen because there are also circumstances that parties get unhappy in bilateral contracts; if for a example a price rises or falls against the interests of a party, then that party may wish to escape from such contracts. In some of these circumstances, the contract reaches trial. Here, it is essential to remark that the difference between unilateral and bilateral contracts has already a fine-tuning of more than a century (see the reference below). The adherence lies in the fact that a unilateral contract seeks an act, while a bilateral contract seeks a promise as acceptance [Wormser, 1916]. In unilateral contracts, until

¹"An offer which the offeror should reasonably expect to induce action or forbearance of a substantial character on the part of the offeree before acceptance and which does induce such action or forbearance is binding as an option contract to the extent necessary to avoid injustice."

the performance of an act (i.e., up to completion of the act) the offer can be withdrawn [American Law Institute, 1981]. Such freedom is argued as fair considering the freedom it provides to contracting parties to reconsider until the completion of an act [American Law Institute, 1981]. Unilateral contracts are central in the sense that they enhance private autonomy of contracting parties, enabling cooperation with conditional agreements [Caruso, 2018].

In accordance with the Bow-Tie Method the main *Hazardous Event* with the case under examination is that Michelle's client may deliver a website but potentially does not get paid for it. The risk is "clearly hidden" in the fact that at any point prior to the delivery of the website the third-party may cancel the agreement. The *Risk Source* is that the provided offer is made on the ground of a *unilateral* agreement. The *Proactive Control* in this case is counter-offering with a bilateral agreement to secure the event of potential non-payment in case of completion of the work prior to the final delivery.

9.2 Legal Risk Explanation

Reflection 2 reads as follows.

Reflection 2: *The Bow-Tie Method can be used to **explain** risk in legal cases to non-legal experts*

The Bow-Tie Method, and EBT as its ontological extension, can be used by legal experts to explain risk for legal cases to non-legal experts. Lawyers are often times tasked with explaining complex legal information in a straightforward manner to non-legal experts, even laymen. In their attempt to explain such information clearly, they may use a variety of tools, one of which is the Bow-Tie Method. Using methods to explain legal information to non-legal experts frequently occurs in legal cases. One striking example is an analogous comprehensibility tool often used in jury trials in the US: the *Special Verdict*.

The jury or the judges are regularly facing the task of determining whether (1) in case of a dispute, the offeree may claim damages from the offeror under Unilateral Contracts or (2) the offeror may cancel the contract with the offeree under Bilateral Contracts. Under *American Law*, it is the task of the jury to understand the circumstances of the case clearly in order to make an educated decision. Under the *American Rules of Civil Procedure* ², the jury ³ can render a *special verdict* in the form of an extensively written finding on each issue of fact.

²<https://www.law.cornell.edu/rules/frcp/rule49>

³If requested to do so by the trial judge

Such a verdict, in case of complex issues, helps structure the case in a consistent and understandable way ⁴. Indeed, the verdict may also be used for the delineation of the available prevention measures in the contracting arrangement of unilateral or bilateral agreements. The obvious reason is that the deciding process on the appropriate prevention measure is fairly complex. Thus, investigating the cognitive interface between an *expert analysis* and a *prevention measure* becomes more relevant. A question that here arises, is how to leverage a special verdict to *explain* a unilateral or bilateral contract decision to someone visually and clearly? On top of that we remark that in such cases a visual explanation should be expressed in laymen terms, preferably in accordance with the rules of propositional deductive logic, which are proven to help the jury with clarifying *legalese* [Brewer, 2017]. Moreover, we explicitly remark that the members of the jury do not need to have knowledge of propositional deductive logic. They should only be given the opportunity to follow the recipe in clear step by step guidelines.

By combining the *clarity* of propositional logic with the *efficiency* of iContracts and the *latest developments* in AI, we may arrive at more *explainable* and *interpretable* forms of using contracts to explain legalese to non-legal experts. In this way, we will be able (1) to visualise to the jury the decision-making process of parties in legal disputes prior to the dispute and (2) to delineate with a higher degree of clarity whether a party is knowingly liable for potential actions. These two results (visualisation and delineation) may happen through explaining their risk trade-offs retroactively. Assuming that the parties to the disputes have had earlier access to the relevant information, we opine that the dispute may not have happened in the first place.

In relation to our case study, we assume (or remark) that Michelle is able to visualise the legal risk analysis on the Bow-Tie Method and to explain to Andy visually the risk he is facing if he directly accepts the offer made by the third-party instead of counter-offering with a bilateral agreement.

9.3 Legal Text Improvement

Reflection 3 reads as follows.

Reflection 3: *The Bow-Tie Method can be used to **improve** legal text or speech from the perspective of legal risk*

⁴Sometimes, however, the responses of juries to special verdict questions are internally inconsistent; the judge makes of such responses whatever the judge can

The Bow-Tie Method can be used by legal experts and non-legal experts to improve legal text or speech with legal risk in mind. Each time people communicate and exchange information, legal risk is lurking. People with legal training are more aware of the legal consequences of their text and speech than people without legal training. Indeed, during speaking it is difficult to use standard formats to protect speech for legal risk. Therefore, during writing text, often-times experts in law and also non-legal experts use templates to structure their text accordingly. That is particularly the case for contracting templates.

Most corporate legal practice and personal contracting business today start with the review of a contract template. Later on this is tailored to the specific needs of a contracting agreement. For personal affairs or smaller business affairs it is also likely to experience the straight-forward application of a template, which may happen without following precise tailoring. Indeed, most of the contracting templates are reviewed and tested over time. Several industries, such as the Oil & Gas industry are relevant to be mentioned. Contract negotiations are by and large dependent on contracting templates. Here it is useful to mention that the negotiations focus on technical terms such as the price of sale and the percentages used for negotiation, as well as on indemnity clauses for liability and risk distribution. In even *newer* industries, such as the sustainability industry, the contract template terminology is currently being developed (see, e.g., the JARGONFREE project⁵).

Contract Templates & Havilteksten

A recent example in this area comes from the Dutch Law using *Havilteksten*, developed by the Dutch Bar Association on the basis of the XML standard. The Havilteksten use a standardised language that is (1) structured, (2) legally tested, (3) easy to share, and (4) easy to re-use.

iContracts relate with such templates in three ways. First, they *reduce the time* to arrive at a negotiating outcome for the terms that are earlier negotiated, or even today. Second, they *only relate to specific parts* of the process. A contract language is solely one aspect of the contracting process. Moreover, there is the *understanding* and the *execution*, where iContracts' contribution is by automating those parts. Third, there are *automation benefits*. With the application of AI and LLMs, it is possible to exploit LLMs to identify (or to find) new gaps in contract templates. Here, we remark that even contract templates may include open slots. When combining the safety of contract risk management with the

⁵<https://projects.tuni.fi/jargonfree/>

speed of LLMs, we will see that the economic analysis becomes more important for end-users.

Despite the universal recognition for the need for standardised legal templates, as well as multiple international attempts to establish uniform contract rules (see, e.g., Creative Commons ⁶), there is as yet no globally recognised (re)source of truth for contract templates. Some researchers are expecting that LLMs will change this reality, while others do not believe so. Still, provided that the issue of *user trustworthiness* remains high, we would like to mention that a significant help towards a better standardisation comes from the support that LLMs offer. They are able to support legal experts in conducting minor tasks. We mention: summarising, explaining, and analysing risk.

As a result, Michelle will be able (after some time or training) to formulate an existing contract template and propose to Andy the use of that specific template as the basis of the counter offer for a bilateral agreement. Moreover, she may perform an analysis which she started earlier to optimise both the contract as well as the counter-offer email. The final result contributes towards helping Andy to be secure in the communications with the third party.

9.4 Protection of Privacy

Reflection 4 reads as follows.

Reflection 4: *The collection of prevention data falls under the **protection of sensitive data***

The collection of data for prevention will fall under the umbrella of sensitive data collection for privacy purposes. This is due to the high risk of misuse or breaches of privacy associated with sensitive information. Let us investigate large organisations, such as financial institutions, where risk management is situated in a distinct department responsible for the management of risks of all kinds. Such organisations do typically adopt advanced data protection procedures for collecting and handling risk data, including prevention data. They are all in compliance with the regulations, such as the General Data Protection Regulation (GDPR). When *processing* or *collecting* data to be used for prevention, organisations (1) will be operating within the realm of risk management practices and (2) will need to comply with the same principles and protocols as with risk data, and other sensitive information. It entails robust privacy and data collection protocols including data security, consent, transparency and compliance.

⁶<https://creativecommons.org>

Moreover, the potential collection of prevention data should comply with the overall risk management strategy and the objectives of an organisation. Three issues to take into consideration are: *potential threats*, *data sensitivity*, and *impact*.

While processing all client data, Michelle should in principle be careful with the privacy of their client information. In this context, one may rightfully wonder: what is the *privacy treatment* for prevention data? Therefore, Michelle should be “obliged” to follow standard practice for the *protection* of sensitive data and for the *privacy* of Andy’s data, without having to invent new privacy policies.

9.5 Workflow Automation

Reflection 5 reads as follows.

Reflection 5: *iContracts will **gradually automate** most parts of the legal workflow*

Going from the introduction of a new agreement to its final execution, there will be a number of steps that contribute towards the **total legal workflow**. Today *some* of those steps are already automated, although *most of them* are still manually performed. iContracts introduce new opportunities to automate much more of those steps. As we have seen in Reflections 1 to 4, the workflow of a lawyer will within ten years be significantly influenced by iContracts. Indeed, the automation of some of those tasks will become possible with big leaps and small steps. That is also the case with (1) *client to client communications* and (2) *agreement development* and (3) *execution*, as we have seen in Chapter 2.

9.6 A Coda

Indeed, today (September 2024), Michelle, may not be able to exploit the benefits of this research in full. The plain reason is that technology has not advanced to the point where her work can be fully automated. That is also the case for Andy, who still needs to rely on manual work and the trust of a human legal expert. However, with time progressing and technology advancing, a great deal of the manual work that we see today will be gradually replaced by technology.

