

INSIDE ARBITRATION: SMART CONTRACTS VERSUS SMART (AND) LEGAL CONTRACTS: UNDERSTANDING THE DISTINCTION AND THE IMPACT OF SMART LEGAL CONTRACTS ON DISPUTE RESOLUTION

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Legal Briefings - By **Natasha Blycha, Brenda Horrigan and Guillermo García-Perrote**

The legal industry is (rightly) increasingly interested in the impact of digitalisation on contracts, legal disputes and our profession more broadly. The starting point for any useful and meaningful discussion around the inevitable transition to a digitised form of contracts with code (and the impact this will have on disputes) must begin with some key agreed definitions. Unfortunately there is a growing body of scholarship within both the legal and “coding” professions where “arguments [particularly in respect of ‘smart contracts’] can be based on ill understood technical concepts... and uninformed use of legal nomenclature”.¹ This is generating both technical and legal analysis that does not assist the profession in moving forward in its understanding of the institutional, process and rule based changes required as a result of digitalisation.

This article will first set out the context and definitions of both smart contracts and smart legal contracts, and second set out some considerations for the legal profession in the use of smart legal contracts and how their use and form might impact dispute resolution going forward.

SMART CONTRACT V SMART LEGAL CONTRACT - LOST IN TRANSLATION?

Definitions are of course only as “correct” as some tipping point of common usage finds them. While citizens of a particular country might like to call a cake a “sock”, it is not surprising to expect that they might encounter difficulties when travelling elsewhere to find that their purchased “sock” is not fit for purpose (indeed – a sock is not best served with tea!).

This facetious example describes the current state we find ourselves in in respect of the (perhaps linguistically more explicable) conflation of discussions around smart contracts (transactional code on a blockchain²) and the digitalised version of the legal contract (which we refer to as a Smart Legal Contract or SLC), where the latter is indeed worthy of significant legal scholarship and attention. As one academic recently put it: “the unfortunate labelling of these technologies as ‘contracts’ has spawned a plethora of legal theories, which are built on unsubstantiated technical claims and terminological misunderstandings...Concepts such as ‘validation’ or ‘self –enforcement’, both of which constitute permanent fixtures of the ‘smart contract’ narrative, seem to have hijacked common sense with promises of certainty and guaranteed performance to the point where a structured and logical argument is rendered difficult.”³

With this in mind we return to our definitions; a widely accepted definition of Smart Contract is some version of:

- computer code that, upon the occurrence of a specified condition or conditions, runs on a distributed ledger (or blockchain).

Equating a Smart Contract ipso facto with a legally enforceable contract because it contains the word “contract”, is technically the same as suggesting that any software program could be called a contract – this is clearly incorrect.

Alternatively, a Smart Legal Contract (SLC) can be described as:

- A legally binding, digital agreement in which part or all of the agreement is intended to execute as algorithmic instructions.

The Blycha and Garside model sets out five key components to an SLC⁴:

- Status: legally binding – an SLC must conform to the established rules of contract;
- Form: the machine readable or digital state;
- Contents:
 - Natural Language, as in any traditional legal contract being any typical contracting and business language used in the jurisdiction of the contract; and
 - Computer code, or other forms of machine-readable or algorithmic instructions intended to run digitally.
- Active Function: the how, when and why the digital components of an SLC are triggered or affected by data or events generated from external or internal data sources, including the results of previously executed algorithms
- Digital Execution Mechanism: the digital hosting or domain of the SLC.

As we can see, an SLC might include code or smart contracting components (as set out in (3)(b) of the model above), but this is only one component of the digitally transformed contract.

Smart Contracts and SLCs are therefore two very different animals. Discussion on the topic of smart contracts tends to conflate these different concepts and focus on the technological aspects, often disregarding the legal aspects. Here we focus on SLCs as facilitators of the integration of computer code and natural language into a technically functional and legally enforceable contract. Indeed, an SLC incorporates coded elements to give legal efficacy to a contract with those automated components. These coded elements add an entirely new characteristic to an SLC as compared to a traditional contract, namely the automation of the performance of certain (but not all) rights and obligations via the inclusion of coded instructions, which in turn creates new areas of tension (and opportunities) in the contracting process.

Having established a definitional base line for an SLC, we can now discuss how the use of SLCs might impact dispute resolution processes and institutions. By moving away from the more commonly debated question of how a Smart Contract interacts with the law and disputes, to asking the same questions but in respect of SLCs, we are able to generate some practical and exciting new discourse on what lies ahead for the legal profession.

IMPACT OF SMART LEGAL CONTRACTS ON DISPUTE RESOLUTION

The impact of SLCs on dispute resolution is manifold.

First, the inclusion of code and the automation of certain aspects of the contract add a layer of complexity to the operational issues in Smart Legal Contracts. As an illustration, the operation of the SLC contract may be impacted by coding bugs, bad 'oracles' (or external providers of information and inputs to the coded element of the SLC), or hacking resulting in a failure to execute the contract properly. Relevantly, the consequence of the mistake or error will be felt in real-time - rather than being litigated post-facto, the incorrect code/data has already had consequences that must be made good. Thus, when code is incorporated into a contract, the parties should specify in advance whether the failure of code to run as expected gives rise to a breach of contract, or whether alternative manual means of performing the job the code was meant to perform will still suffice as performance. Under the model proposed by Blycha and Garside⁵:

- for certainty, a new contractual mechanism 'pairs' a natural language clause or expression of the relevant obligation to the coded expression of that obligation. The contract should make it evident that the relevant code acts as a translation, expression or agreed performance mechanism for its 'paired' natural language clause or obligation;
- there should be overarching interpretation provisions and drafting to reflect the intention of the contracting parties (including for where the codes fail) that assists in managing, interpreting and using the data inputs and outputs which form part of the active nature of an SLC; and

- clauses that can be expressed or automated via incorporated codes should be carefully selected and classified, based on principles of good legal drafting.

These provisions ensure there is certainty of terms, and enable the parties to manage the risks of automation or reliance on data to trigger performance, because they provide a method by which contracting parties can remove the prospect of inadvertently breaching a contract due to automation failures, or of an Internet of Things (IoT) device linked to an automated contractual obligation providing incorrect information. This certainty and management of risk through the SLC in turn facilitate effective dispute resolution.

Second, to ensure enforcement and the ability of the parties to resort to legal remedies in case of non-compliance, the parties must be able to determine which decision-maker has jurisdiction to hear and decide their disputes. In this regard, the inherent flexibility of arbitration proceedings, and the straightforward enforceability of awards globally pursuant to the New York Convention, make international arbitration a prime candidate for resolving SLC disputes.

Third, among other impacts of SLCs on dispute resolution, we also highlight the following:

- The use of code in an SLC to automate notifications and certain steps of the dispute resolution mechanism will require careful, specialist drafting to ensure effective dispute resolution is available to users.
- The impact of the generated data arising from the running of a SLC over time as evidence (i.e., a digital audit trail of performance) bolsters the debate about the arguable insufficiency of procedure and evidence law, and the need for enhanced rules of evidence to respond to the impact of digitalisation.
- Determining the legal state of the code within the relevant SLC will entail an analysis on whether the code forms a part of the contract, and whether a failure of the code constitutes a breach of the contract and in what circumstances.
- Courts and arbitral tribunals may coin new implied terms for SLCs or at least adapt the words or provisions that the decision maker assumes were intended to be included to respond to digitalization.
- Courts and arbitral tribunals may need new civil procedure rules governing their access to digital platforms, and the ability to make the corresponding rulings affecting code.

CONCLUSION

In sum, the growth of SLCs will require adaptation by the legal profession and modification of approaches to dispute resolution, but one which is not a whole-cloth reinvention, but rather a modification and supplementation of existing rules and procedures.

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1. Eliza Mik - Smart Contracts: a Requiem (2019) 36 Journal of Contract Law at 70.
2. Where an equally large number of people (both inside the legal industry and out) through insufficient understanding of the myriad technical nuances in distributed ledger technology, proffer flawed commentary and scholarship as to how that technology 'blanket style' pertains to the law.
3. Eliza Mik - Smart Contracts: a Requiem (2019) 36 Journal of Contract Law at 70.
4. Natasha Blycha and Ariane Garside – Smart Legal Contracts: A Model for the integration of code into contracts [publication pending 2020.]
5. Natasha Blycha and Ariane Garside – Smart Legal Contracts: A Model for the integration of code into contracts [publication pending 2020.]

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