Neither relational nor discrete: the ISDA master agreement as a bimodal contract

Neither relational nor discrete: the ISDA Master Agreement as a bimodal contract

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Key points

- Relational contracts have started to be recognized in English law.
- Relational Contract Theory posits a spectrum between discrete (simple exchange) and relational (contracts which depend more on an ongoing relationship between the parties) contracts.
- The International Swaps and Derivatives Association (ISDA) has proposed the introduction of a smart contract version of its Master Agreement (MA).
- In its proposal, ISDA discerns between 'operational' and 'non-operational' clauses, ie those that can be coded because they are very mechanical in nature and those more relational clauses which depend on certain expectations such as good faith and commercial reasonableness.
- This article investigates those contracts, using the MA and the proposed introduction of a smart contract version, which contain both discrete and relational terms and discusses the potential implications of labelling a new kind of contract defined here as a 'bimodal contract'.

1. Introduction

While recent English court decisions have seemed to abjure the concept of relational contract theory,[1] the decisions in *Yam Seng*[2] and subsequently in *Bates v Post Office*[3] reified the pioneering work carried out by each of Stewart Macaulay and Ian Macneil in the 1960s and 1970s, respectively.[4] Coupled with a general judicial movement towards contextualism,[5] any notions that a contract should be assessed only within its

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1 For example, *Globe Motors v TRW Lucas Varity Electric Steering* [2016] EWCA Civ 396; *UTB LLC v Sheffield United Ltd* [2019] EWHC 2322 (Ch), *Taqa Bratani; Wales v CBRE Managed Services Ltd* [2020] EWHC 16 (Comm).

2 *Yam Seng PTE v International Trade Corp Ltd* [2013] EWHC 111.

3 *Alan Bates and Others v Post Office Limited* (no 3: Common Issues) [2019] EWHC 606 (QB).

4 Stewart Macaulay, 'Non-Contractual Relations in Business: A Preliminary Study' (1963) 28(1) American Sociological Review 55; Ian Macneil, 'The Many Futures of Contract' (1974) 47 Southern California Law Review 691.

5 *Investors Compensation Scheme v West Bromwich Building Society* [1997] UKHL 28; Catherine Mitchell, *Interpretation of Contracts* (2nd edn, Routledge-Cavendish 2018) 32, Kindle ed: describing the 'contextualist shift'; Roger Brownsword, 'Contracts with Network Effects: Is the Time Now Right?' in Stefan Grundmann, Fabrizio Cafaggi and Giuseppe Vettori (eds), *The Organizational Contract: From Exchange to Long-Term Network Cooperation in European Contract Law* (Markets and the Law) (1st edn, Routledge 2013) 151: 'In a number of seminal cases, most famously in *Investors Lid v West Bromwich Building Compensation Scheme Society* the House of Lords (led, in particular, by Lords Hoffmann and Steyn) has transformed the way that Commercial contracts should be interpreted. Famously, in the *Investors Compensation* case Lord Hoffmann declared that, in relation to commercial contracts, 'contextual interpretation should be preferred to an abstracted "literalism". Text, so to speak has been replaced by context (or by text in context); as one commentator has put it, contextualism "is rapidly becoming the bible for the courts in contract interpretation disputes"'.

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four corners have essentially dissipated.[6] However, opinions—both academic and judicial—continue to oscillate on both contractual construction and recognition of a class of contracts referred to as 'relational'.

The theory posits, inter alia, that contracts can be observed on a spectrum, at one end are those referred to as *discrete contracts* which describe one-off, simple, exchanged-based transactions, and at the other end are those referred to as *relational contracts* which can be thought of as being dependent on not just the contractual terms but on the wider relationship between the parties. However, as Macneil observes, either end of the spectrum, 'like the ends of rainbows . . . are mythical',[7] meaning that most contracts sit somewhere between either extremity. Yet, it is proposed by those supportive of the theory that nearly all contracts are, to some extent, at the relational end of the spectrum.[8]

The predominant approach so far has been to designate contracts as either *discrete* or *relational*. However, academics, such as Melvin Eisenberg,[9] Hugh Collins,[10] Elizabeth Mertz[11] and even Macneil[12] himself, have recognized that many contracts are, in fact, intrinsically dichotomous, containing both relational and discrete terms. This article seeks to investigate this phenomenon by using the International Swaps and Derivatives Association (ISDA) Master Agreement (MA) as a case study of what is referred to here as an example of a *bimodal contract*, a contract that is neither entirely relational nor entirely discrete but a combination of the two. In particular, this article evaluates the proposal by ISDA to introduce a smart contract version of its MA which has highlighted that there are some terms in the MA, referred to by ISDA as 'operational clauses',[13] which are highly discrete, acontextual functions which can be automated, while recognizing that there are also 'non-operational clauses'[14] which may expressly refer to behavioural standards such as 'good faith' and 'commercial reasonableness'.

6 Gerard McMeel, 'Language and the Law Revisited: An Intellectual History of Contractual Interpretation' (2005) 34(3) Common Law World Review 256, 266.

7 Ian MacNeil, 'Relational Contract Theory: Challenges and Queries' (2000) 94(3) Northwestern University Law Review 877, 896.

8 Yehuda Adar and Moshe Gelbard, 'Contract Remedies—A Relational Perspective' in Stefan Grundmann, Fabrizio Cafaggi and Giuseppe Vettori (eds), *The Organizational Contract: From Exchange to Long-Term Network Cooperation in European Contract Law* (Markets and the Law) (1st edn, Routledge 2013) 279: 'in modern times most contracts are in fact at least to some extent - relational in one sense or another'; David Campbell, 'Good Faith and the Ubiquity of the "Relational" Contract' (2014) 77(3) Modern Law Review 475, 482: [In relation to the decision in *Yam Seng*]: 'Leggatt J has here captured what Macneil fundamentally wanted to argue in the relational theory of contract: all contracts are relational in the sense that no contract is the product only of the agreement of the parties but rather is a fundamentally co-operative exchange relationship, the essential nature of which is not traceable to the parties' individual subjective wills.'

9 Hugh Collins, *Regulating Contracts* (OUP 1999) 142: 'My analysis suggests, therefore, that all transactions have both discrete and relational dimensions, and that these classifications obscure the importance of variables along three different dimensions of normative orientation.'

10 Melvin A Eisenberg, 'Why There Is No Law of Relational Contracts?' (1999) 94 Northwestern University Law Review 805, 814.

11 Elizabeth Mertz, 'An Afterword: Tapping the Promise of Relational Contract Theory—"Real" Legal Language and a New Legal Realism' (2000) 94(3) Northwestern University Law Review 914.

12 See, MacNeil (n 7) 896; Ian Macneil, 'Relational Contract Theory as Sociology: A Reply to Professors Lindenberg & de Vos' (1987) 143(2) Journal of Institutional and Theoretical Economics 272.

13 ISDA, Linklaters, 'Whitepaper Smart Contracts and Distributed Ledger—A Legal Perspective' August 2017, 4, 11.

14 Iibid 11.

2. Relational contract theory

In a lot of ways, relational contract theory mirrors developments in behavioural economics, with both concepts criticizing the more classical, formalist approach—whether it be 'classical contract law or rational choice theory'—and instead focusing on the mercurial and social nature of humans when interacting with each other. There are also connections with the concept of 'incomplete contracts' in which it is deduced that contracts cannot cover every eventuality because the parties cannot prognosticate on all possible future events and because the costs of endeavouring to do so would be prohibitive or, to put it in the language of economists, the transaction costs would far exceed the potential utility.[15] In essence, relational contract theory, much like these developments in economics, recognizes that contracts are limited in their capacity to capture the whole nature of the relationship between the parties.

David Frydlinger, Oliver Hart and Kate Vitasek have advocated that, in recognition of the aforementioned concepts, what emerges between the parties is a move away from trying to catalogue each potential scenario, repudiating the self-serving, individualistic, corporate protectionism which creates a tension at the planning stage of every potential business relationship or creating what Oliver Hart and John Moore have described as 'shading'—the idea that if a party feels aggrieved it will adjust its performance, perhaps only subtly, to the detriment of the relationship.[16] Frydlinger, Hart and Vitasek put forward the concept of 'formal relational contracts' which, far too simply put, are written contracts with a more flexible framework based on pre-defined principles and objectives which overlay the more specific operational terms.[17]

In terms of English law, these new concepts form part of a continuum of the ideas promulgated by the English judiciary—in a judicial and extrajudicial capacity—that, eg and in the words of Lord Steyn, a 'thread runs through our contract law that effect must be given to the reasonable expectations of honest men'.[18] Relational contract theory can therefore be seen as an extension—at least judicially given the chronological judicial recognition of the two—of the contextual approach, which was advocated by proponents such as, amongst others, Lord Wilberforce[19] and Lord Hoffmann,[20] respectively.

The idea that contracts must be viewed within the 'matrix of facts'[21] in which they are situated is developed further by relational contract theory in which there are certain

15 Robert E Scott, 'The Case for Formalism in Relational Contract' (2000) 94 Northwestern University Law Review 24.

16 David Frydlinger, Oliver Hart and Kate Vitasek, 'A New Approach to Contracts: How to Build Better Long-term Strategic Partnerships' (2019) Harvard Business Review, September–October 2019 Issue <https://hbr.org/2019/09/a-new-approach-to-contracts> accessed 23 January 2022.

17 Ibid.

18 Johan Steyn, 'Contract Law: Fulfilling the Reasonable Expectations of Honest Men' (1997) 113 Law Quarterly Review 433, 433.

19 *Prenn v Simmonds* [1971] 1 WLR 1381.

20 *Investors Compensation Scheme Ltd* (n 5).

21 *Reardon Smith Line Ltd v Hansen-Tangen (The Diana Prosperity)* [1976] 1 W.L.R. 989 at 997: 'what the court must do must be to place itself in thought in the same factual matrix as that in which the parties were'; *Prenn v Simmonds* (n 19) 1383, 1384; 'The time has long passed when agreements, even those under seal, were isolated from the matrix of facts in which they were set and interpreted purely on internal linguistic considerations'; *The Commercial Court Guide* (10th edn), C1.3(h): 'The "factual matrix"

expectations incumbent upon the parties which may not be expressly set out in the legal agreement between them.

Ian Macneil set out 'four core propositions' of relational contract theory: (i) 'every transaction is embedded in complex relations', (ii) understanding the transaction requires understanding the 'essential elements of its enveloping relations', (iii) 'effective analysis of any transaction requires recognition and consideration of all essential elements of its enveloping relations that might affect the transaction significantly' and (iv) combining contextual analysis of relations and transactions is more efficient and complete than non-contextual analysis.[22]

However, relational contract theory has been predominantly associated with the idea that contracts fit on a spectrum. Macneil originally placed 'transactional or discrete contracts' at one end and 'relational contracts' at the other. The two are defined as follows:

(a) 'Discrete transactions are characterized by careful measurement of what is exchanged, specification of time and manner of performance, comprehensive planning regarding the allocation of burdens and benefits, and little expectation of cooperation outside the scope of the exchange.'[23]
(b) Relational contracts 'involve continuing exchange and interaction between the parties. The open-ended nature of contractual relations prevents detailed planning and necessitates cooperation and compromise regarding the incidence of contractual burdens and benefits.'[24]

This spectrum or scale, applied to contracts in toto, has been argued to slant heavily towards the relational end, with even ostensibly discrete transactions, such as the one-off purchase of fuel, being described as relational. The argument in this particular example is that the motorist understands that she must pay for the fuel, the attendant accepts the money offered as an acceptable form of payment and must provide change if applicable, and both parties understand the surrounding circumstances around their transaction which allows it to occur without criminal or civil sanctions.[25] On this basis, Macneil labelled such transactions as 'as-if discrete', since all discrete transactions, he postulated, 'are embedded in relations'.[26] While this sociolegal observation is perfectly rational, this article does not apply such a broad definition of the term relational contracts because it is the author's opinion that such broad strokes, when aiming for practical application rather than theoretical validity, essentially devalue the vital role that the relational contract theory spectrum can provide in the categorization of contracts, especially in the face of some

means the background knowledge which would reasonably have been available to the parties in the situation in which they found themselves at the time of the contract/document'.

22 See MacNeil (n 7) 881.

23 Review, 'The New Social Contract: An Inquiry into Modern Contractual Relations by Ian R. Macneil' (1981) 79(4) Michigan Law Review 827, 827, Survey of Books Relating to the Law.

24 Ibid 828.

25 Richard Austen-Baker and Qi Zhou, *Contract in Context* (Routledge 2015) 79 referencing Ian Macneil, 'The Many Futures of Contract' (1974) 47 Southern California Law Review 691.

26 See MacNeil (n 7) 895.

criticism that discerning between two ends of such a scale to begin with is 'too simplistic'[27] an exercise.

While the distinction between discrete and relational contracts initially gathered pace under English law, particularly with its judicial application in two particular court cases,[28] this article investigates the dichotomy 'within' particular contracts as well as 'between' them. The English courts have so far investigated a 'class of contract' referred to as relational.[29] This article suggests that such investigations should discern between discrete and relational classes when analysing terms rather than just contracts more holistically. This concept questions the infallibility of proclaiming one contract to be discrete and another to be relational or, as MacNeil initially argued, that all contracts are relational.[30] While this article does not seek to undermine the original theory on relational contracts, it does seek to reframe and build upon it. Instead of considering a contract to be categorized as discrete or relational in the macro-sense, the theory can be applied on a micro-level to the very terms of one particular contract which creates an interstice 'between the terms' of a contract rather than 'between contracts' more widely.

This article uses the ISDA MA as a case study given its ubiquity[31] in the over-the-counter (OTC) derivatives market and the development by ISDA of a smart contract version of its MA which raises important questions over the automation of some of its terms but not others which, it is argued here, indicates a division within the MA between discrete and relational terms.

3. ISDA

The ISDA MA has been described as 'probably the most remarkable standard form ever devised'.[32] This contract forms an important legal basis between parties dealing in the OTC derivatives market even as regulators have tried to reassert their authority after decades of deregulation.

The MA was first pitched as a compromise to protracted legal wrangling and associated battles of the forms which had arisen between a group of banks dealing in OTC derivatives. In pursuing the standardization of legal terms, they formed what they referred to as a Documentary Committee in May 1984, which, a year later in 1985, evolved into ISDA and in that same year, as described by Simon Firth, the association had published a 'Code of

27 Catherine Mitchell, 'Behavioural Standards in Contracts and English Contract Law' (2016) 33 Journal of Contract Law 234, 15.

28 See *Yam Seng PTE v International Trade Corp Ltd* (n 2); *Alan Bates and Others v Post* (n 3).

29 David Campbell, 'Ian Macneil and the Relational Theory of Contract' CDAMS Discussion Paper 04/1E, March 2004, 19; See, *Alan Bates and Others v Post* (n 3) [711]: 'I consider that there is a specie of contracts, which are most usefully termed "relational contracts", in which there is implied an obligation of good faith (which is also termed "fair dealing" in some of the cases)'.

30 David Campbell, 'Good Faith and the Ubiquity of the "Relational" Contract' (2014) 77(3) Modern Law Review 475, 482.

31 Kunel Tanna, 'Close-Out Netting' in Edmund Parker and Marcin Perzanowski (eds), *Practical Derivatives: A Transactional Approach* (3rd edn, Globe Law and Business Publishing 2017) 79.

32 Philip R Wood, *Set-Off and Netting, Derivatives, Clearing Systems* (3rd edn, QC, Sweet & Maxwell 2019) 13-003: 'This ISDA Master Agreement is probably the most remarkable standard form ever devised in view of the immense range of transactions that it covers, the gigantic amounts which rest on its provisions, and the width of its use by the market. It is a worldwide standard for international and local deals.'

Standard Wording, Assumptions and Provisions for Swaps, comprising a set of standard definitions and terms that could be incorporated in whole or in part into individually negotiated agreements,'[33] the precursor to the ISDA MA. The MA is in its third iteration, the initial version was published in 1987, followed by a second in 1992, and the latest version was published in 2002. It is accompanied by supporting documents, such as a Schedule, a Credit Support Annex, Definitions and Confirmations—these, along with the MA, form a single agreement. English law and New York law are the two main governing laws of the MA but this has since expanded. For the purposes of this article, references to the MA are to the 2002 English law version.

OTC derivatives are private, bilateral arrangements between counterparties trading financial instruments such as forwards, options, swaps or combinations of the aforementioned. In essence, derivatives are financial contracts deriving their value from some underlying commodity, asset, rate, index or the occurrence or magnitude of an event.[34] OTC transactions do not involve an exchange sitting between the parties guaranteeing performance of the contract so they pose additional systemic risk to the market. As John Biggins and Colin Scott describe, 'OTC derivatives trading is ... considered capable of offering highly innovative and socially useful risk management and investment strategies ... [however, it is] comparatively more risky than exchange trading.'[35]

Since the global financial crisis of 2008, there has been a concerted effort by regulators to rail back on a lot of the deregulation which had been so zealously pursued under the neoliberal belief that markets could adequately self-regulate using OTC derivatives to simply and effectively reduce risk. However, in spite of these attempts and in the face of criticism of regulatory efforts to control an already complex market,[36] the terms of the ISDA MA still play a major role in framing the legal obligations and responsibilities of parties within this very global market, creating what Jeffrey Golden has described 'as a kind of global law by contract'.[37]

The wider implications of ISDA's role aside, the success of the MA has meant that ISDA has been able to take a leading role in pushing forward a number of initiatives in order to improve standardization and operational risk management across the market. One of those initiatives is the proposed introduction of its MA in smart contract form, a concept which, as TJ de Graaf explains, was originally, 'at a time when the blockchain did not yet exist ... a computerized transaction protocol that execute[d] the terms of a contract'.[38]

33 Simon Firth, *Firth: Derivatives Law and Practice* (Sweet & Maxwell 2019) Release 41, 10A.002.

34 Randall Dodd, 'The Structure of OTC Derivatives Markets' (2002) 9 The Financier 1, 1.

35 John Biggins and Colin Scott, 'Public–Private Relations in a Transnational Private Regulatory Regime: ISDA, the State and OTC Derivatives Market Reform' (2012) 13 European Business Organization Law Review 309, 317.

36 Richard Bookstaber, *A Demon of Our Own Design: Markets, Hedge Funds, and the Perils of Financial Innovation* (John Wiley & Sons 2007) 259–60: 'Each innovation adds layers of increasing complexity and tight coupling. And these cannot be easily disarmed through oversight or regulation. If anything, attempts at regulating a complex system just makes matters worse.'

37 Jeffrey Golden, 'Judges and Systematic Risk in the Financial Markets' (2012) 18 Fordham Journal of Corporate & Financial Law 327, 331.

38 Tycho de Graaf, 'From Old to New: From Internet to Smart Contracts and from People to Smart Contracts' (2019) 35(5) Computer Law & Security Review 4.

4. Smart contracts

A 'smart contract', as defined by Christopher Clack, Vikram Bakshi and Lee Braine, is 'an automatable and enforceable agreement. Automatable by computer, although some parts may require human input and control. Enforceable either by legal enforcement of rights and obligations or via tamper-proof execution of computer code.'[39] 'Smart contract' is perhaps a misnomer in the nomenclature, as ISDA admits when it refers to its proposition as a 'smart derivative contract',[40] the distinction being that a smart contract may not be a contract at all, because the idea was originally conceived by programmer Nick Szabo to describe a 'set of promises, specified in digital form, including protocols within which the parties perform on these promises'.[41]

Kristian Lauslahti, Juri Mattila and Timo Seppälä define smart contracts from a legal perspective as 'digital programs, based on the blockchain consensus architecture, which will self-execute when the terms of the agreement are met, and due to their decentralized structure are also self-enforcing and tamper-proof.'[42]

Smart contracts predominantly operate on blockchains: digital, peer-to-peer, decentralized platforms which derive their name from the blocks of data which act as a snapshot of transactions and which are linked together through each node (each computer system in the network) to create data chains, providing an unalterable public record.[43] These decentralized systems and records give rise to the term 'Decentralized Ledger Technology' (DLT).[44] DLT refers to the decentralization of any database that is required in a network so that the participants, as part of a blockchain, are able to verify and monitor activity. This is done in a way that anonymizes a lot of the data, replacing such information with cryptographic keys. This same technology is used to underpin cryptocurrencies such as Bitcoin. On such networks, smart contracts can form the legal basis of arrangements between parties.

However, while ISDA has published a paper on potential DLT solutions,[45] the MA as a smart contract would, as originally proposed by ISDA, operate slightly differently. ISDA Assistant General Counsel Ciaran McGonagle, along with academic Christopher D Clack, emphasize that participants in the financial services sector will not necessarily adopt a peer-to-peer solution simultaneously so a centralized technology platform may need to be conceived instead.[46] ISDA would implement this centralized platform by way of the ISDA Common

39 C Clack, V Bakshi and L Braine, 'Smart Contract Templates: Foundations, Design Landscape and Research Directions' 4 August 2016, revised 15 March 2017, 2.

40 ISDA, King & Wood Mallesons, 'Whitepaper Smart Derivatives Contracts: From Concept to Construction' October 2018, 5.

41 Nick Szabo, 'Smart Contracts: Building Blocks for Digital Markets' (1996) <https://www.fon.hum.uva.nl/rob/Courses/InformationInSpeech/CDROM/Literature/LOTwinterschool2006/szabo.best.vwh.net/smart_contracts_2.html> accessed 23 January 2022.

42 Kristian Lauslahti, Juri Mattila and Timo Seppälä, 'Smart Contracts—How will Blockchain Technology Affect Contractual Practices?' ETLA 68 (January 2017) 11.

43 Kate Raworth, *Doughnut Economics: Seven Ways to Think Like a 21st Century Economist* (Random House 2017) 187.

44 Jeremy M Sklaroff, 'Smart Contracts and the Cost of Inflexibility' (2017) 166(1) University of Pennsylvania Law Review 263, 267.

45 ISDA, Clifford Chance, R3, Singapore Academy of Law, 'Private International Law Aspects of Smart Derivatives Contracts Utilizing Distributed Ledger Technology' January 2020.

46 Christopher D Clack and Ciaran McGonagle, 'Smart Derivatives Contracts: the ISDA Master Agreement and the automation of payments and deliveries' April 2019, 3.

Domain Model[47] which allows parties to record trade details, provide settlement information, exchange confirmations, manage collateral and credit risk, and standardize reporting information. It is also governed by an executive committee of ISDA members.[48] In this sense, the MA as a smart contract would resemble the original conception of the idea, being a computerized transaction which executes certain terms without the decentralized network.

For the purposes of this article, the important point raised by the proposed introduction of a smart contract version of the MA is the description by ISDA of certain clauses within the agreement. In order to establish what will be automated, ISDA has categorized two clauses in its MA, those referred to as 'operational' and those which are 'non-operational'.[49] This categorization derives from the initial purpose of automation as envisaged by ISDA which is to streamline the process of payment obligations or collateral transfers[50] under the MA.[51] Transfers of collateral or margin—an amount required by one or either party to mitigate the risk of movements in the price of the underlying instrument—can still be found to be processed between parties via an e-mail exchange which is followed by a bank transfer. Automation, for this purpose, is designed to alleviate the administrative burden and mitigate the risk of certain manual processes. It is indicative of the mechanical nature of certain operational clauses in the MA, referred to here as discrete clauses, which obviate human intervention and the associated susceptibility to error. That does not mean that such clauses are unfettered from judicial intervention, there may still be problems which arise with these clauses as well as the coding which underpins them. As the UK Jurisdiction Taskforce has observed, smart contracts may reduce legal intervention but there are still risks associated with, eg, the code itself or system failures which will still require adjudication.[52] So the code will be, prima facie, clear and unambiguous and execute as expected but there will be times when a 'judge will need to look beyond the four corners of the code'.[53]

This code, when run, will only be able to compute a certain amount of context and far less than what Hugh Collins and David Campbell have referred to as the 'implicit dimensions of contracts', such as 'fair dealing, good faith and co-operation'.[54] Ostensibly, those operational clauses which have been coded to run as a smart contract will operate in a limited contextual capacity and execute in a discrete manner, for example, when X event occurs and parameter Y is met, then execute Z. The MA as a whole will comprise those discrete clauses which are

47 ISDA, 'ISDA Whitepaper, The Future of Derivatives Processing and Market Infrastructure' September 2016.

48 ISDA CDM 2.0 FAQ–March 2019, 2 <http://assets.isda.org/media/649ca60c-2/b3dd70a2-pdf/> accessed 2 February 2022.

49 See, ISDA, Linklaters (n 13) 11.

50 ISDA, 'ISDA Legal Guidelines for Smart Derivatives Contracts: Introduction' January 2019.

51 As mentioned, the MA is an umbrella agreement under which ancillary documents sit. Collateral payments, for example, are often dealt with under a Credit Support Annex which, while separately agreed, falls under the MA as a single agreement as defined under s 1(c) of the English law 2002 MA.

52 UK Jurisdiction Taskforce, 'Legal Statement on Cryptoassets and Smart Contracts', The LawTech Delivery Panel, November 2019 [136].

53 Ibid [151].

54 David Campbell and Hugh Collins, 'Discovering the Implicit Dimensions of Contracts' in David Campbell, Hugh Collins and John Wightman (eds), *Implicit Dimensions of Contract: Discrete, Relational and Network Contracts* (Hart Publishing 2003) 25.

coded and, contiguously, those relational clauses which may form part of the static code but will not, in the words of ISDA, 'embed any conditional logic'.[55]

5. Classifications

As alluded to above, relational contract theory has become an extension, or is at least a close relative, of contextualism, the idea most notably propagated in English law by Lord Wilberforce, Lord Steyn and Lord Hoffmann, respectively. Lord Steyn encapsulated contextualism in the case of *Total Gas Marketing Ltd v Arco British Ltd*[56] in which he stated that questions of interpretation have to be considered 'in the light of the contractual language, the contractual scheme, the commercial context, and the reasonable expectations of the parties'.[57]

However, claims that a contract should be considered 'relational' are often accompanied by two concepts which trouble English law: implied terms and good faith. More troublingly for English law, the case of *Yam Seng* raised the prospect of implying terms of good faith, doubling the ante.

Implied terms

There was a brief period in which implied terms were considered more broadly as simply part of the process of construction. This was signalled by Lord Hoffmann's statement in '*Attorney General of Belize v Belize Telecom Ltd*[58] in which he stated that implication of a proposed term should be considered if it 'spell[s] out in express words what the instrument, read against the relevant background, would reasonably be understood to mean.'[59]

However, in the case of *Marks and Spencer plc v BNP Paribas Securities Services Trust Company (Jersey) Limited*,[60] the judgment of Sir Thomas Bingham in the case of *Philips Electronique Grand Public SA v British Sky Broadcasting Ltd* was emphasized:

> The courts' usual role in contractual interpretation was, by resolving ambiguities and reconciling apparent inconsistencies, to attribute the true meaning to the language in which the parties themselves had expressed their contract. The implication of contract terms involved a different and altogether more ambitious undertaking: the interpolation of terms to deal with matters for which, ex hypothesi, the parties had made no such provision. It was because the implication of terms was potentially so intrusive that the law imposed strict constraints on the exercise of that extraordinary power.[61]

As David Campbell and Hugh Collins have observed, the courts are 'reluctant to rewrite contracts in ways that they might regard as more reasonable, or to satisfy what may be regarded as a reasonable expectation which has not been protected by an express

55 See ISDA (n 50).
56 *Total Gas Marketing Lid v Arco British Ltd* [1998] CLC 1275.
57 Ibid.
58 [2009] UKPC 10.
59 *Attorney General of Belize v Belize Telecom Ltd* [2009] UKPC 10 [21].
60 *Marks and Spencer plc v BNP Paribas Securities Services Trust Company (Jersey) Ltd* [2015] UKSC 72.
61 *Philips Electronique Grand Public SA v British Sky Broadcasting Ltd* [1995] EMLR 472, 474.

contractual agreement.'[62] However, they put forward an argument that, in certain circumstances, the only way to distinguish between, what Stewart Macaulay refers to as, the 'real deal' and the 'paper deal'[63]—what the parties have agreed as opposed to what their contract may stipulate—is by incorporating the implicit dimensions of the contract into the analysis.[64]

By classifying the MA as 'bimodal', the intention is not to suggest that implied terms could not form a part of contractual construction even though doing so in the MA, given its global use and importance in such a large market, would appear unlikely. However, nor is there a subscription to the idea that describing contracts or contractual terms as relational will reflexively mean that an implied term of good faith will need to apply.[65]

The designation of terms as either discrete or relational could help to demarcate between those clauses (or even within clauses themselves) which, in the case of a dispute, could determine their treatment by the courts. For example, ISDA uses its payment clause—section 2(a)(i) of the MA which will operate alongside specific parameter-setting clauses within the ISDA Schedule and Credit Support Annex[66]—as an example of a clause which is open to automation.[67] Indeed, payment obligations, such as netting or the exchange of margin, are often cited as responsive to automation because the inputs can be rendered with a high degree of certainty.[68] Compare this payment obligation as applied to those amounts arising in the periodic course of business under the MA to the more specific close-out amount calculation. The close-out amount is payable on early termination[69] and forms part of the early termination amount payable under section 6 of the MA. Historically, previous versions of the MA set out various methodologies for the calculation of amounts payable on early termination,[70] which included the non-defaulting party determining its loss in good faith[71] or obtaining third party

62 Campbell and Collins (n 54) 47.

63 Stewart Macaulay, 'The Real and the Paper Deal: Empirical Pictures of Relationships, Complexity and the Urge for Transparent Simple Rules' in David Campbell, Hugh Collins and John Wightman (eds), *Implicit Dimensions of Contract: Discrete, Relational and Network Contracts* (Hart Publishing 2003) 51.

64 Campbell and Collins (n 54) 47.

65 This idea is incongruous with the opinion of Mr Justice Fraser: see, *Alan Bates and Others v Post* (n 3) [711] in which he stated: 'I consider that there is a specie of contracts, which are most usefully termed "relational contracts", in which there is implied an obligation of good faith (which is also termed "fair dealing" in some of the cases).'

66 For example, para 11 of the 2016 English law ISDA Credit Support Annex (CSA) for Variation Margin sets out the 'Thresholds' which set the amount(s) that either party accepts as a credit exposure on the other party, if a market move pushes the party that is out-of-the-money over the Threshold the other party can only call for the excess over that amount. 'Minimum Transfer Amounts', also found at para 11 of the aforementioned CSA, are similar to Thresholds but once exceeded, the other party can call for the entire amount. These payment parameters are quantifiable and automatable.

67 ISDA, 'Legal Guidelines for Smart Derivatives Contracts: the ISDA Master Agreement' (February 2019); ISDA, 'Legal Guidelines for Smart Derivatives Contracts: Collateral' (September 2019).

68 Take the payment of variation margin, for example, where the value of the trade is established and the contract will be settled in three months' time. Between the time the trade is executed and settlement (whether to maturity or cash-settled before), the inputs are known and can be coded: the executed price, the market price of the underlying asset, and the parameters set by the parties (such as the Thresholds and Minimum Transfer Amounts, see ISDA Credit Support Annex (n 66) which determine at which point payments will be made.

69 Which occurs if, eg, an 'Event of Default' or a 'Termination Event' occurs. Crudely put, the former involves some fault on the part of the defaulting party (eg, failure to pay, misrepresentation, bankruptcy, etc), whereas the latter can be seen more generally as somewhat outside the party's control (eg, force majeure, change in the law, etc).

70 The parties would agree which methodology would apply to their transactions in the ISDA Schedule.

71 1992 ISDA Master Agreement, s 14 (Definitions) definition of Loss: 'A party's good faith determination of its losses and costs. . .'; also set out in: Paul C Harding, *Mastering the ISDA Master Agreements (1992 and 2002)* (3rd edn, Pearson 2010) 135.

market quotations which had to produce a commercially reasonable result.[72] This caused a number of disputes in both the UK[73] and the USA[74] and, in part, led to the introduction of the 2002 MA which now utilizes a close-out amount methodology under which a non-defaulting party must act in good faith in order to determine any gains or losses using commercially reasonable procedures.[75]

These examples show that, even between amounts payable, there are those terms which will be discrete, routine and uniform in their calculation, whereas there are others which will be far more relational, irregular and ad hoc in their methodology.

Automation can capture a lot of those discrete terms and will, over time, subsume more even perhaps those which we would today consider relational.[76] However, in the event of a formal dispute, it is proposed here that the court's role is to limit its interference with such discrete terms and to concentrate on, or fill gaps around, those which, eg, require the parties to act in ways which are not yet, and which may never be, automatable.[77]

Robert Scott has observed that while it can be argued that all contracts are relational, contract law is formal, simple and classical.[78] In contrast, Ian Macneil suggests that contract law 'should generally track the relational behaviour and norms found in the relations to which it applies'.[79] Distinguishing terms within contracts as either discrete or relational, could be used to reconcile, as far as possible, such opinions. This bifurcation of terms could be used in contract law to signpost where judicial intervention may be required and where it is not. However, such distinction, it is conceded, is much easier to make with the kind of smart contract discussed here, with its associated operational and non-operational clauses.

Good faith

Good faith in the performance of contracts has historically been met with 'hostility'[80] under English law. In fact, it has been met with similar opprobrium by the UK government

72 1992 ISDA Master Agreement, s 14 (Definitions) definition of Settlement Amount: 'Market Quotation cannot be determined or would not (in the reasonable belief of the party making the determination) produce a commercially reasonable result'.

73 See, eg, *Peregrine Fixed Income Ltd v Robinson Department Store Public Co Ltd* [2000] EWHC Commercial 99.

74 See, eg, Rosalind Z Wiggins and Andrew Metrick, 'The Lehman Brothers Bankruptcy G: The Special Case of Derivatives' (2019) 1(1) Journal of Financial Crises 151, 161: describing the case of *Nomura v Lehman* in which prior the termination of their transactions, Nomura owed Lehman USD 484m; following Lehman's bankruptcy, Nomura shifted from using Market Quotation to Loss which, it contended, meant that Lehman owed it USD 217m.

75 Christian M McNamara and Andrew Metrick, 'The Lehman Brothers Bankruptcy F: Introduction to the ISDA Master Agreement' (2019) 1(1) The Journal of Financial Crises 137, 144: 'This may include using one or more of firm or indicative quotations and/or relevant market data such as rates, prices, yields, yield curves, volatilities, and correlations, whether from third parties or internal sources. Thus, the Close-Out Amount is in many ways a hybrid of the Market Quotation and Loss approaches, requiring the non-defaulting party to use more objective sources of information than required under the Loss approach, but not necessarily dealer quotations when such quotations cannot be obtained due to market stress.'

76 For example, ISDA is looking into the automation of the close-out amount, used here as an example of a relational contract term. See ISDA (February 2019) (n 67) 28–31.

77 Determining 'Close-Out Amounts', eg—which is the idea that across multiple transactions between parties, on termination, a single sum is payable by one party to the other—must be determined, in accordance with s 14 of the MA, 'by the Determining Party (or its agent), which will act in good faith and use commercially reasonable procedures in order to produce a commercially reasonable result'.

78 Robert E Scott, 'The Case for Formalism in Relational Contract' (2000) 94 Northwestern University Law Review 847, 10.

79 MacNeil (n 7) 903.

80 See, *Yam Seng PTE v International Trade Corp Ltd* (n 2), quoting Ewan McKendrick, *Contract Law* (9th edn) 221–2.

which disseminated a paper in which it raised concerns centred around the unpredictability of the term when used in legal proceedings.[81] The concept has been described by Michael Furmston and John Carter as being associated with certain standards such as honesty, reasonableness and fair dealing, with the latter traditionally being unrecognized in contract law.[82]

Express duties of good faith have not seemed to pose insuperable problems of interpretation. There have even been attempts to standardize the concept when expressed by the parties[83] but, more broadly, its inclusion in a contract will convince the courts to look at 'the context in which the good faith obligation was entered into'.[84]

Implied terms, as a default, are not to be interpolated unless, as was affirmed in *Marks and Spencer plc v BNP Paribas Securities Trust Company (Jersey) Ltd*,[85] 'at the time the contract was made, a reasonable reader of it would consider the term to be so obvious as to go without saying or the term is necessary for business efficacy.'[86] Moreover, this test, coupled with an apprehension, both in the legal and economic literature, about the imprecision of the concept of good faith leads to a more general argument against, or at least an exhortation for proceeding extremely cautiously with, implying terms of good faith into contracts.[87]

The recognition of a class of contracts referred to as 'relational', precipitated by the case of *Yam Seng*,[88] has, in Lord Justice Leggatt's words, 'provoked divergent reactions' but 'there appears to be growing recognition that such a duty [of good faith] may readily be implied in a relational contract'.[89]

81 Massimo Bianca, 'Good Faith Related Duties of Disclosure and a View on Franchising' in Stefan Grundmann, Fabrizio Cafaggi and Giuseppe Vettori (eds), *The Organizational Contract: From Exchange to Long-Term Network Cooperation in European Contract Law* (Markets and the Law) (1st edn, Routledge 2013) 182: 'One of the difficulties in accepting the principle is apparent in the lack of a sure, common notion of good faith. This difficulty has been pointed out in a paper produced by the British Government at the London SECOLA Convention of 2002. According to the paper, the government was seriously apprehensive about the introduction of the good faith principle, which could raise serious problems, as it is extremely difficult to find an agreement among the member States about the notion of fairness.'

82 Michael Furmston and John Carter, 'Good Faith in Contract Law: A Commonwealth Survey' in *Eppur si muove: The Age of Uniform Law: Essays in Honour of Michael Joachim Bonell to Celebrate his 70th Birthday*, International Institute for the Unification of Private Law (UNIDROIT) (eds), 2, 988.

83 *Unwin v Bond [2020] EWHC 1768 (Comm)* [230]: once good faith is established the party or parties subject to it must observe 'the following minimum standards (i) they must act honestly, (ii) they must be faithful to the parties' agreed common purpose as derived from their agreement, (iii) they must not use their powers for an ulterior purpose, (iv) when acting they must deal fairly and openly with the claimant, (v) they can consider and take into account their own interests but they must also have regard to the claimant's interest.'

84 See, *Unwin v Bond* ibid [229]: 'the context in which the good faith obligation was entered into is everything, or at least a great deal'.

85 See, *Marks and Spencer plc v BNP* (n 60).

86 *UTB LLC v Sheffield* (n 1) [197].

87 Vanessa Sims, 'Good Faith in English Contract Law: Of Triggers and Concentric Circles' (2004) 1(2) Ankara Law Review 213, 221: when arguments are raised against the recognition of good faith 'particular emphasis [is] placed on the well documented need for certainty in commercial transactions'; Charles J Goetz and Robert E Scott, 'Principles of Relational Contracts' (1981) 67 Virginia Law Review 1089, 1093: 'Because these standards [best efforts, good faith etc.] are usually described in general terms, it is difficult to apply them in any specific context. Therefore, relational contracts also require more creative control mechanisms than do conventional contingent contracts. In any cooperative contract where performance obligations remain imprecise, there are inevitable costs in ensuring that any particular level of performance is achieved.'

88 See, *Yam Seng PTE v International Trade Corp Ltd* (n 2).

89 *Sheikh Tahnoon Bin Saeed Bin Shakhboot Al Nehayan v Kent* [2018] EWHC 333 (Comm) [168].

Judicial reaction to relational contracts following the decision of *Yam Seng* has been mixed[90] but there appears to be a particular impediment to certain classes of contract, such as the MA, being classified as relational and that relates to their standard form as well as their professional drafting. The treatment of standard-form contracts and the need for consistency in their interpretation was addressed by Lord Diplock in the case of *The Nema*:[91]

> ... it is in the interests alike of justice and of the conduct of commercial transactions that those standard terms should be construed ... as giving rise to similar legal rights and obligations in all [cases] in which the events [that] have given rise to the dispute do not differ from one another in some relevant respect. It is only if parties to commercial contracts can rely upon a uniform commercial construction being given to standard terms that they can prudently incorporate them in their contracts without the need for detailed negotiation or discussion.[92]

Professionally drafted agreements

The 'strict constraints' on implying terms and the continued unease under English law to derogate too far from the principle of freedom of contract[93] must be assessed in conjunction with the statement by Lord Hodge in *Wood v Capita Insurance Services Ltd*[94] that the English courts would, prima facie, adopt a more formalist or textualist approach to the interpretation of sophisticated agreements in comparison to the perhaps more contextual approach they may take to the interpretation of less sophisticated agreements. Even though he qualified that assertion somewhat by saying that there may be circumstances where the division between sophisticated and unsophisticated will be inconsequential.[95]

Furthermore, in two recent English High Court decisions, there has been a judicial reluctance to imply terms into professionally drafted agreements. In *UTB LLC v Sheffield United Ltd*,[96] Fancourt J stated that where 'detailed, professionally-drawn contracts exist, it is more difficult to imply terms because there is a strong inference that the parties have given careful consideration to all the terms by which they agree to be bound'[97] and in *Taqa*

90 For example, compare the negative (or perhaps 'cautious' is the more appropriate word) treatment of relational contracts in: *UTB LLC v Sheffield United Ltd* [2019] EWHC 2322 (Ch), *Taqa Bratani; Wales v CBRE* (n 1), *Globe Motors Inc* (n 1), with the more positive treatment in: *D&G Cars Ltd v Essex Police Authority* [2015] EWHC 226 (QB).); *Essex County Council v UBB Waste* (Essex) Ltd [2020] EWHC 1581 (TCC); *Amey Birmingham v Birmingham City Council* [2018] EWCA Civ 264; *Bristol Groundschool Ltd v Intelligent Data Capture Ltd* [2014] EWHC 2145 (Ch).

91 *Pioneer Shipping Ltd v BTP Tioxide Ltd ('The Nema')* [1982] AC 724.

92 Ibid 737; truncated quote taken from *GSO Credit v Barclays Bank Plc* 2016 EWHC 146 (Comm) [26].

93 *Arnold v Britton* [2015] UKSC 36.

94 *Wood v Capita Insurance Services Ltd* [2017] UKSC 24.

95 Ibid [13]: 'Some agreements may be successfully interpreted principally by textual analysis, for example because of their sophistication and complexity and because they have been negotiated and prepared with the assistance of skilled professionals. The correct interpretation of other contracts may be achieved by a greater emphasis on the factual matrix, for example because of their informality, brevity or the absence of skilled professional assistance. But negotiators of complex formal contracts may often not achieve a logical and coherent text because of, for example, the conflicting aims of the parties, failures of communication, differing drafting practices, or deadlines which require the parties to compromise in order to reach agreement. There may often therefore be provisions in a detailed professionally drawn contract which lack clarity and the lawyer or judge in interpreting such provisions may be particularly helped by considering the factual matrix and the purpose of similar provisions in contracts of the same type'.

96 See, *UTB LLC v Sheffield* (n 1).

97 Ibid [206].

Bratani Ltd v Rockrose UKCS8 LLC,[98] HH Judge Pelling QC stated that implying terms must be carried out with particular care in professionally drafted and negotiated agreements between well-resourced parties because 'where an issue has been left unresolved, it is much more likely to be the result of choice rather than error'.[99]

In terms of judicial treatment of the ISDA MA in particular, it has been described by the English courts as 'probably the most important standard market agreement used in the financial world'[100] and 'plays an important role in the efficient functioning of the international financial markets and their financial stability'.[101] In addition, it has been stated that it is 'axiomatic' that the MA is 'interpreted in a way that achieves the objectives of clarity, certainty and predictability, so that the very large number of parties using it know where they stand'[102] and that 'consistency, predictability and certainty are essential and so they are much less susceptible to interpretation by reference to background circumstances or matrix'.[103] Such descriptions would appear to support the view more generally proposed by Catherine Mitchell that English law is 'undergoing a formalist—or at least anti-contextualist—shift'.[104]

Classification as relational

Despite these signals that the MA should be interpreted narrowly and viewed conceptually as at the discrete end of the spectrum, there are some indications that the MA is not so easily categorized.

First, the agreement expressly refers to certain standards of behaviour expected from parties using the MA. The English law version of the 2002 MA expressly references 'good faith' 12 times and 'commercially reasonable' 11 times, respectively.[105] In the case of *Mid Essex Hospital Services NHS Trust v Compass Group UK and Ireland Ltd*,[106] it was held that where specific references are made to concepts such as good faith, 'care must be taken not to construe a general and potentially open-ended obligation such as an obligation to "co-operate" or "to act in good faith" as covering the same ground as other, more specific, provisions, lest it cut across those more specific provisions and any limitations in them.'[107] While this may ostensibly limit recognition of relational concepts in the MA to those express references in isolation, the inclusion of such relational expectations itself is redolent of something more than a simple exchange.

98 *Taqa Bratani Ltd v Rockrose UKCS8 LLC* [2020] EWHC 58.

99 Ibid [29].

100 *Lomas (Together the Joint Administrators of Lehman Brothers International (Europe)) v JFB Firth Rixson Inc* [2010] EWHC 3372 (Ch) [53].

101 *AWB (Geneva) SA & Anor v North America Steamships Ltd & Anor* [2007] EWCA Civ 739 [37].

102 See, *Lomas* (n 100) [53].

103 *LSREF III Wight Ltd v Millvalley Ltd* [2016] EWHC 466, 42.

104 Mitchell (n 5) 89.

105 Matthew Armitage, 'Trust, Confidence, and Automation: The ISDA Master Agreement as a Smart Contract' (2022) 43(2) Business Law Review 56, 59.

106 *Mid Essex Hospital Services NHS Trust v Compass Group UK and Ireland Ltd (t/a Medirest)* [2013] EWCA Civ 200.

107 Ibid [154].

Secondly, as a theoretical construct, the MA would, in many cases fulfil the requirements of what would be defined as a relational contract. Using Macneil's 12 axes determining extreme discrete or relational traits in contractual relations or Mr Justice Fraser's characteristics of relational contracts enumerated in *Bates v Post Office*,[108] we can see that the MA could fit into some of the relational examples provided: the cumulative transactions underpinned by the MA will often require and expect future cooperation, there may be personal relationships involved albeit under the auspices of large corporations, there is a certain amount of trust and confidence reposed in the other party, there is fidelity involved in the transactions, transferring rights under the MA will often be refused if there is a material impact on credit ratings, and its users, as evinced by some of the express terms in the MA, expect certain behavioural standards from their counterparties.[109]

Finally, economist Oliver Williamson has suggested that discrete contracts operate well for high certainty, low complexity, low dependency situations,[110] which does not align with the market volatility, high complexity and systemic risk associated with OTC derivatives markets. Moreover, scholars such as Jeffrey Golden see the MA as a relational contract because, inter alia, it is necessarily 'incomplete' on the basis that it is designed to 'establish a framework for a course of dealing over a (usually extended) period of time' and so 'the need to fill in meaning may be more to the fore'.[111] Given that all contracts can be seen as incomplete,[112] the question then becomes how to reconcile this assertion that contracts cannot ever fully reflect the relationship between the parties with the reluctance of the courts, for the reasons enumerated above, to interfere too much with the terms of the MA.

6. Conclusion

The proposed introduction of a smart contract version of the MA raises certain questions about how the contract is classified and interpreted. As Melvin Eisenberg has observed, relational contract theory provides a method by which the construction of contracts by the courts can be individualized, open and inductive which stands in opposition to classical contract law which is standardized, axiomatic and deductive.[113] This also feeds into the ideas promulgated by psychologists and economists which have refuted ideas of rational choice theory and formalism in a world of behavioural biases and incomplete contracts.

However, there are convincing arguments, both legal and economic, for why treating the MA as a relational contract, in a practical sense, gives rise to uncertainty and higher

108 *Alan Bates and Others v Post* (n 3).

109 Ian Macneil, 'The Many Futures of Contract' (1973–1974) 47 Southern California Law Review 738; See *Alan Bates and others v Post* (n 3) [725].

110 David Frydlinger and others, *Contracting in the New Economy: Using Relational Contracts to Boost Trust and Collaboration in Strategic Business Relationships* (Palgrave Macmillan 2021) 65.

111 Jeffrey Golden, 'Interpreting ISDA Terms: When Market Practice is Relevant, As of When is it Relevant?' (2014) 9(3) Capital Markets Law Journal 301.

112 Clayton P Gillette, 'Contractual Networks, Contract Design, and Contract Interpretation: The Case of Credit Cards' in Stefan Grundmann, Fabrizio Cafaggi and Giuseppe Vettori (eds), *The Organizational Contract: From Exchange to Long-Term Network Cooperation in European Contract Law* (Markets and the Law) (1st edn, Routledge 2013) 87.

113 Melvin A Eisenberg, 'Why There Is No Law of Relational Contracts' (1999) 94 Northwestern University Law Review 805, 812.

back-end transaction costs. In relation to the former, there are legitimate concerns that 'individualizing' judicial responses create incertitude in a large and global market which relies on the standard-form MA. In addition, Eric Posner and, more specifically on the complexity of adjudicating financial disputes, Jeffrey Golden, have raised concerns that while judges who understand the complex derivatives market can play an important role in interpreting these contracts in a way that mitigates systemic risk, the responsibility is often placed upon judges without such expertise to interpret these terms which itself presents that very risk.[114] In relation to the latter, higher 'back-end' transaction costs—a concept discussed by Robert Scott and George Triantis and which relates to the costs of enforcement of the contract as opposed to 'front-end' transaction costs which relate to the costs of, for example, negotiating the terms of the contract that will govern the relationship[115]—arguments abound of how formalism in contractual interpretation reduces costs for both parties in disputes brought before the courts.[116]

If we maintain a demarcation between contracts, reconciling these methods of interpretation and classification are, prima facie, insoluble because there is too much logic on either side to dismiss the other. On formalism and contextualism alone, the argument for the former is that courts should not interfere with the written terms agreed between the parties while the argument for the latter is that contracts provide an incomplete picture of what has been agreed. The label discrete/relational has the same logical polarity when used reasonably.

The answer proposed in this article, which may already subconsciously form part of judgments on contracts, is to focus on how we view the classification of discrete/relational not by the contract as a whole but by the terms contained therein. I refer to such contracts as 'bimodal contracts', containing both discrete and relational terms. While this label maintains a distinction at the contract level, its aim is to focus on how such contracts may vacillate between either end of the discrete/relational spectrum based on the operational or non-operational nature of their terms. Ostensibly, this designation could create more complexity to a theory that has already been met with judicial and academic demurral. However, if the aim of the theory is to more accurately reflect business and societal attitudes and norms, circumstances may dictate an even more nuanced approach to that originally devised by Ian Macneil and Stewart Macaulay.

The reluctance we have seen from the English courts so far has, inter alia, hinged upon designating certain contracts as relational. In the case of *Morley v The Royal Bank of Scotland PLC*,[117] Mr Justice Kerr stated that he rejected the 'argument that the loan agreement, as extended several times, was a "relational" contract of any kind. It was an ordinary loan facility agreement.'[118] It is, prima facie, the classification of the whole contract as

114 Golden (n 37) 337; Eric A Posner, 'A Theory of Contract Law Under Conditions of Radical Judicial Error' (2000) 94 Northwestern University Law Review 749.

115 Robert E Scott and George G Triantis, 'Anticipating Litigation in Contract Design' 115 Yale Law Journal 814, 824.

116 For example, see Mitchell (n 5); see, Scott (n 78) 10.

117 *Morley v The Royal Bank of Scotland PLC* [2020] EWHC 88 (Ch).

118 Ibid [159].

relational which appears so unpalatable and, given the exigency of certainty in globally important standard market agreements[119] and the purported sophistication of the parties involved in financial transactions[120] documented by the MA, it stands to reason that courts may be hesitant to class such contracts as relational with all the associated connotations. The solution, in the case of the MA, may be to either omit such classifications altogether or, as is proposed in this article, to designate such contracts as 'bimodal' with the aim of interpretation being to distinguish those clauses which are discrete with those that are relational, a task that becomes less abstruse with the advent of a smart contract version of the MA, with its operational and non-operational clauses.

Robert Scott, in an article ominously entitled 'The Death of Contract Law', observes that 'contracting parties may simply prefer to behave under two sets of rules: an explicit (and rigid) set of rules for those parts of their relationship that require legal enforcement and an implicit (and flexible) set of rules for those aspects that respond best to self-enforcement.'[121] When discussing a smart contract version of the MA, we maintain the distinction between rigidity and flexibility described by Scott but the mechanisms for enforcement are upended. Within the MA, there are clauses which fit the discrete, transactional, rule-based logic of automation while there are also those clauses which are relational and necessarily flexible. However, the enforcement, in the first instance, of discrete terms under the smart contract will be self-enforcing, or at least automatic, while the enforcement of relational terms will require more traditional legal enforcement.

The development of smart contracts for wider use in otherwise traditional legal arrangements is still in the nascent stages but the attempt here is to suggest that simple bifurcation of contracts as either discrete or relational may impose too heavy a burden on contracts which are often more nuanced and difficult to categorize. While there are archetypal examples of discrete and relational contracts, perhaps consideration of 'bimodal contracts', which contain characteristics of both, presents a more palatable solution to interpreting and categorizing certain contracts which are themselves being designed and executed in different and more complex ways.

119 See, *Lomas* (n 100) [53].

120 In the aforementioned case of *Morley*, eg, the parties were a commercial property developer and a bank, respectively.

121 Robert E Scott, 'The Death of Contract Law' (2004) 54(4) The University of Toronto Law Journal 369, 389.