

# Contract design for humans: preventing cognitive accidents

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A shorter version of this paper will appear as a book chapter:

R Waller, 'Designing contracts for human readers' in Marcelo Corrales, Helena Haapio and Mark Fenwick (eds), *Research Handbook on Contract Design*, Edward Elgar Publishing, in press (publication scheduled for 2020).

If you wish to cite this paper, please check that the content you wish to refer to is in the version you cite.



*"Sally, will you make me the happiest man in the world, and accept full responsibility if I should fail to be the happiest man in the world?"*

Comedians often break linguistic norms to make us laugh and make us think. It's comically absurd in this New Yorker cartoon,<sup>1</sup> but such a clash of romance and legal boilerplate is quite an accurate depiction of how brands communicate with us as consumers. They promise great things in the headline, but immediately hedge in the small print.

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<sup>1</sup> Joe Dator, *The New Yorker*, 28 October 2019. Reproduced by permission of The New Yorker Collection/The Cartoon Bank

Viewing contract-related problems as cognitive accidents changes the perspective to one of duty of care, and risk management.

In talks, I sometimes show an airline ad promising ‘Free\* Flights’. Audiences invariably agree that the asterisk gives the game away. The flights are not in fact free because, as the small print states, there are taxes to pay. The Tom Waits song puts it well: ‘You got it, buddy: the large print giveth; the small print taketh away’.<sup>2</sup>

The cartoon works because it juxtaposes two very different communication genres. The marriage proposal, like a marketing promise, is poetic, persuasive and expressive. It prioritises emotional engagement with the hearer. The disclaimer is the opposite, framed solely from the speaker’s perspective and best kept out of sight.

The term ‘genre’ refers here to any type of discourse that has become common within a culture and has acquired a name along the way – like ‘newsletter’ or ‘poster’ or ‘user guide’. Originating in literary and art criticism, genre has become central to the study of multimodality. This emerging field is the study of how verbal, graphic and other modes combine.<sup>3</sup> Genres embody not only conventionalised linguistic styles and formats, but also conventionalised expectations about the sender (that is, the speaker, writer or publisher) and the receivers or users of the message.

When used well, genres work both for writers and for readers. Writers can work in a format and style that readers are used to. And readers of, say, a set of instructions or a newsletter, know what the writer expects them to do. Each understands the other’s likely motivation and strategies.

In this paper I will discuss the lack of a clear and well-evolved genre for contracts (including related terms such as disclosures or boilerplate), and propose that we need to go beyond just shortening them, printing them in larger type, or translating legalese into plain language. We need to go beneath the surface and develop a new approach rooted in the reality of customer needs and behaviours.

I argue here that many contract-related problems can be viewed as cognitive accidents and that we should change our perspective to one of duty of care, and risk management. I argue that processes are as important as templates or models, so that multi-specialist teams (including legal, marketing and operations people) work together to keep user needs at the forefront, and I speculate about what an emerging genre of human-readable contract might look like.

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<sup>2</sup> Tom Waits, ‘Step Right Up’ in the album *Small Change* (Asylum Records 1976).

<sup>3</sup> See Bateman, Hiippala and Wildfeuer (2017) for an introduction to the field.

‘With this surly and defiant pretence at ‘compliance’ can we really say that these business terms have actually been stated in any meaningful way?’

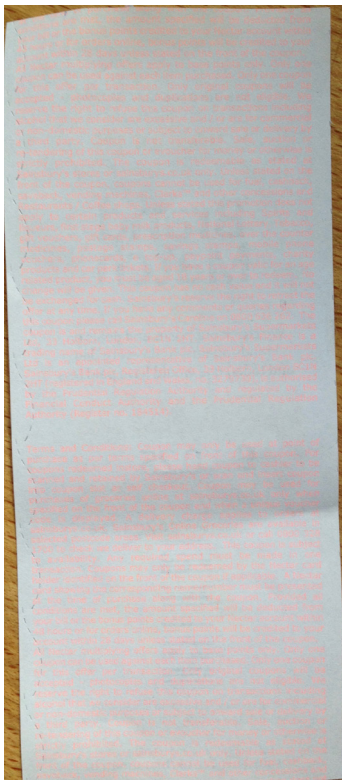


Figure 1. These terms and conditions, on the back of a Sainsbury's supermarket voucher, are printed in pale orange in tiny type. It was almost impossible to photograph and no one could claim this is designed to be read. The information cannot truly be said to have been communicated.

## Contracts as a dysfunctional genre

Because they mostly have everyday names, we instinctively know what genres are, whether they are magazines, corporate websites, love letters or user manuals – each calls to mind a particular type of sender and receiver, an expected format and context, an appropriate critical stance, and a way to read it. In the case of a user manual, for example, we read systematically to solve a problem; in the case of a magazine, we read casually for entertainment. In the best instances of all the genres mentioned, the reader has a clear presence – the language, the structure and the layout are designed with their needs in mind.

In contrast with the genres just mentioned, the typical consumer contract has few headings and no graphic structure to facilitate skim reading. The reader is therefore absent and unrepresented. There is little sense of one party sincerely trying to set out information so that it is usable by another party, as distinct from simply creating a written record in minimal form.

Thinking about traditional consumer contracts in this way, it becomes clear that they are systematically dysfunctional as a genre, and disrespectful of their users. Written in legalese and printed in tiny type, they are not designed to be read. If they were, the type would be larger, and they would contain more headings, summaries, diagrams and other helps. In fact, many are blatantly designed *not* to be read, and are presented at the threshold of usability – which is comically obvious when radio ads are followed by gabbled disclosures, speeded up so as to be barely comprehensible. With this surly and defiant pretence at ‘compliance’<sup>4</sup> can we really say that these business terms have actually been stated in any meaningful way? They might as well have been engraved on a metal plate and fired into space – they would still exist in a theoretical sense, and be no less accessible to consumers.

### *The ‘duty to read’*

It is obviously not feasible to read all the contracts relevant to our everyday transactions, if by ‘reading’ we mean that every word is inspected and considered. Omri Ben-Shahar and Carl Schneider’s ‘Parable of Chris Consumer’ recounts a day in a typical life, studded with an overwhelming number of warnings, disclaimers, nutritional information and so on.<sup>5</sup> Journalists occasionally visit this issue too

4 Compliance with what is uncertain – we must assume the advertiser’s lawyer supplied or approved the wording of the radio ad, but in a Word document or email format.

5 Ben-Shahar and Schneider (2014), page 95.

“Do not call it a ‘duty’. This is not only technically incorrect, but it also encourages judges (and others as well) to moralize or be condescending to persons who do not read everything they sign.”

Charles Knapp

– for example, *Guardian* journalist Alex Hern tried to read all the software terms he encountered in a week, totalling 146,000 words.<sup>6</sup> This is a recurring meme, as is the inclusion of an absurd clause that no one notices – ‘I transfer my immortal soul’ – later revealed to newspapers who need a regular supply of quirky human interest stories.<sup>7</sup>

The object of these exercises is to point up the absurdity of assuming that we read all these documents. However, when things go wrong, the consumer is expected to accept the blame – and indeed there is evidence that they do. Franklin Snyder and Ann Mirabito found that ‘consumers plainly think they ought to read contract terms, even though they never do. They believe themselves irresponsible...and unreasonable...in failing to do so’.<sup>8</sup>

This is enshrined in the concept of the ‘duty to read’ in US jurisprudence. As a non-US non-lawyer I find this a curious concept – how can it reasonably be a duty to carry out an impossible task? According to Omri Ben-Shahar<sup>9</sup> it even applies to illiterate people, since ‘the duty to read encompasses the duty to ask someone to read or to explain its terms’. Some commentators seem to take the duty to read seriously and discuss its case law and implications, while others take off their lawyer suits and speak as humans. In particular, Charles Knapp concludes:

Do not call it a ‘duty’. This is not only technically incorrect, but it also encourages judges (and others as well) to moralize or be condescending to persons who do not read everything they sign. Nobody does that, and in fact nobody is expected to. In standardized form contracting, it is not only *not* encouraged, it is essentially *discouraged*. Contract recitations that say, ‘I have read all of this contract’ are patently false, and are known to be false—to the party who presents a written contract for signature as well as to the party who signs it.<sup>10</sup>

Omri Ben-Shahar is notably sceptical of the whole concept of legally-framed disclosures, and their advocates who he terms ‘disclosurites’. He argues that they are in practice pointless since not reading them is far from a failure of duty – it can be a rational choice:

... there is nothing wrong with one’s autonomous choice to enter a contract not knowing the legal terms, not even caring about the opportunity to read. For those who (smartly) prefer not to know, it is utterly irrelevant whether the terms-they-don’t-know are available

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6 Hern (2015).

7 See, for example, Schwartz (2019)

8 Snyder and Mirabito (2019).

9 Ben-Shahar (2009).

10 Knapp (2015).

...only 0.1% of people read online boilerplate. ”

before or after the deal, inside or outside the shrink-wrap, in small or large print, at the top or the bottom of the web page, in a unified or a separate agreement, one or  $n$  clicks away from the vendor’s homepage, in legal or laymen’s language, in the first version or the last version of the modified booklet of endless terms they receive by mail, and so on. It doesn’t even matter what these terms say – arbitration at home or in Timbuktu. Who cares? When was the last time that your satisfaction with a purchase of a consumer good was affected by what the boilerplate hid?<sup>11</sup>

Yannis Bakos and colleagues<sup>12</sup> reported that only 0.1% of people read online boilerplate. We would hope the figure would be higher for financial products, and indeed a survey for the UK’s Money Advice Service<sup>13</sup> found 16% of people claimed to read the terms and conditions.<sup>14</sup> But the 84% who did not lost an average of £428 each year because they did not understand their product’s terms, with payday loans particularly highlighted. So there is a problem to be solved, particularly as differentiation amongst service products is often located in the contract itself. I can choose from a range of broadband or mobile phone products that are technically identical, but which try to attract me through different teaser rates, bundles, upgrade possibilities, and contract periods, all enshrined in the contract wording.

That’s not to suggest that the solution is to somehow find a way to get people who don’t read to read the unreadable – as Knapp, Ben-Shahar and others have said, that is not going to happen. But we should look for a solution that stops people getting tripped up by the unexpected (I’ll return to that analogy).

### *Human readable versions*

Some organisations attempt to bridge the gap between traditional contracts and their readers by supplying a summary version. Creative Commons call theirs the ‘human-readable’ version.<sup>15</sup> This sounds very considerate and is an amusing dig at lawyers, but it is accompanied by a disclaimer: ‘This is a human-readable summary of (and not a substitute for) the license’. 36% of consumer contracts surveyed by Uri Benoliel and Shmuel Becher<sup>16</sup> which included human-readable clarifications, used a similar disclaimer.

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11 Ben-Shahar (2009), page 5.

12 Bakos, Marotta-Wurgler and Trossen (2014).

13 Phillips (2014).

14 Although this relied on self-reporting, whereas Bakos was able to count clicks.

15 Creative Commons, ‘About the Licenses’ <[creativecommons.org/licenses](https://creativecommons.org/licenses)> accessed 28 December 2019.

16 Benoliel and Becher (2019).

‘...an astonishing and even a bullying presumption that communications you can understand will be trumped by those you cannot.’

This suggests that humans who are not lawyers should not be confident of their ability to understand the full license, and that there are therefore two distinct perspectives on the contract. The legal document is physically available to the human reader but a reliable understanding of it is only available to those with legal training. Linked to this is the common contractual clause that excludes all other communications or promises – an astonishing and even a bullying presumption that communications you can understand will be trumped by those you cannot.

So what does it mean when we agree that we have ‘read and understood’ a contract? Even if we read it, we cannot be sure that we’ve understood it – how many people score 100% in a test? The problem lies as much in the wording of the declaration as in the behaviour of the consumer. A more reasonable declaration would be ‘I accept the terms and conditions’.<sup>17</sup>

The reality is that our signature or click signifies that we want the product, and that we are prepared to risk an imbalanced power relationship with the supplier because we have sufficient trust in the wisdom of crowds (others have already signed and come to little harm), in their brand promises and in regulatory protection.

But this is to take a risk, and I will suggest that the key to an effective genre of human-readable contract is the management of that risk. A human-readable contract is a framework within which each party can carry out their responsibilities towards the other. For companies this means a duty of care, under which they prioritise what to tell customers and how, based on research and risk assessment. For customers this means making sensible decisions (that is, taking sensible risks) about what to read and what to leave unread. A new contract genre will have to provide for this.

### *Optimisation vs transformation*

Reasons typically cited as to why we do not read contracts include their length, their typical font size and their legal jargon. Those attempting to improve contracts tend to focus on these factors, to start with at least. For example, the 2011 EU Directive on consumer rights<sup>18</sup> states that ‘information shall be legible and in plain, intelligible language’. And my own commercial experience as an

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<sup>17</sup> Several years ago I came across this very fair wording from the Automobile Association: ‘I confirm that you have informed me of the importance of reading these before I buy’. And NS&I, a UK government savings scheme, asks applicants to ‘Tick to confirm you’ve had the opportunity to read [the customer agreement]’

<sup>18</sup> Directive 2011/83/EU of the European Parliament and the Council of 25 October 2011 on consumer rights [2011] Official Journal L 304/64, article 7.

“...legibility and plain language are false friends – optimisations at the surface level, giving the illusion of effort and progress, when in reality what is needed is a radical transformation.”

information designer is that most clients at first approach contract simplification as an exercise in plain language translation.

However, Michael Masson and Mary Anne Waldron tested translations of legal text into plain language and found that even though this improved comprehension significantly, performance was still only around 65% for comprehension and scores for legal reasoning were very poor (36%). They conclude that ‘...legal concepts are difficult to understand because, even when explained in plain language, they are complex or because they are in conflict with folk theories of the law.’<sup>19</sup>

So we need to look much further than legibility and plain language, which can be false friends: legible type just serves to reveal the language we can’t understand; and clearer sentences just serve to reveal concepts that do not appear relevant to us and clutter our minds. They are just optimisations at the surface level, giving the illusion of effort and progress, when in reality what is needed is a radical transformation.

## How humans read

How, then, do humans read information? The first thing to note is that only a few humans read contracts, almost none read everything put in front of them, and some don’t read very much of anything.

In most circumstances ‘reading’ does not mean that every word is inspected and understood. I have numerous books which I use thoroughly without reading every word. Reference books are the most obvious example, but this is also true of academic books and journals. The most effective readers are selective, strategic and self-aware in their approach to text.<sup>20</sup>

Even if, as well-educated people, we feel confident that we can understand a consumer contract, the adult skills statistics say we are exceptional. The OECD reports that ‘in most countries there are significant proportions of adults with low proficiency in literacy and in numeracy’.<sup>21</sup>

Adult reading skills are defined as a series of levels, which range from the basic deciphering of print at Level 1 up to sophisticated

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19 Masson & Waldron (1994), page 79.

20 Britton and Glynn (1987).

21 Organisation for Economic Co-operation and Development (2013).

‘...a human readable contract needs to be not-readable as well as readable, exposing its structure and the status of its content to make strategic reading possible.’

problem-solving and interpretative strategies at level 5.<sup>22</sup> In most developed countries around half the population is assessed at below level 3, which is the minimum to deal with longer documents such as contracts. When regulations about transparency refer to the ‘average’ person, it is these people who we should call to mind, not people like ourselves – professionals who would be assessed at level 4 and 5, and represent around 12% of the population. We are not typical and should not trust our own judgement about what is or is not clear.

The psychologist Patricia Wright<sup>23</sup> lists the skills that comprise functional literacy as: search skills for finding information; comprehension skills for interpreting information; inference, reasoning and problem-solving skills for applying information; and the ability to deal with information-systems rather than simply with information.

At any literacy level it is clear that readers do not read everything they are presented with. At the lower levels it may be because of their educational level and lack of practice. At the higher levels it is because they are reading purposefully and strategically.

Indeed Wright<sup>24</sup> points out that when people fail to read something it is usually a deliberate and necessary decision, not simply a failure by them or by the person who wrote or laid out the information:

We live in a world where the amount of written information available to us far exceeds our ability to keep pace with it. Given the limitations of the 24 hours day, deliberately NOT reading is a strategy that is necessary for survival. Capital letters for NOT are used here to emphasize that the kind of NOT reading we are concerned with is a behaviour in its own right; it is not simply the absence of reading. It is far from accidental. Readers are not ‘overlooking’ information that they had intended reading. The kind of NOT reading we will be concerned with here is the intended result of a deliberate strategic decision taken by the reader.

Strategic reading is the key to information overload. We read what we feel is necessary to solve a problem, or answer a question, and if we do not have a problem or a question we may not read at all. So a human readable contract needs to be not-readable as well as readable, exposing its structure and the status of its content to make strategic reading possible.

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22 This classification is used by the main international survey, the Programme for the International Assessment of Adult Competencies (PIAAC), see Organisation for Economic Co-operation and Development, ‘Survey of Adult Skills (PIAAC)’ <[www.oecd.org/skills/piaac/](http://www.oecd.org/skills/piaac/)> accessed 29 December 2019.

23 Wright (1988a).

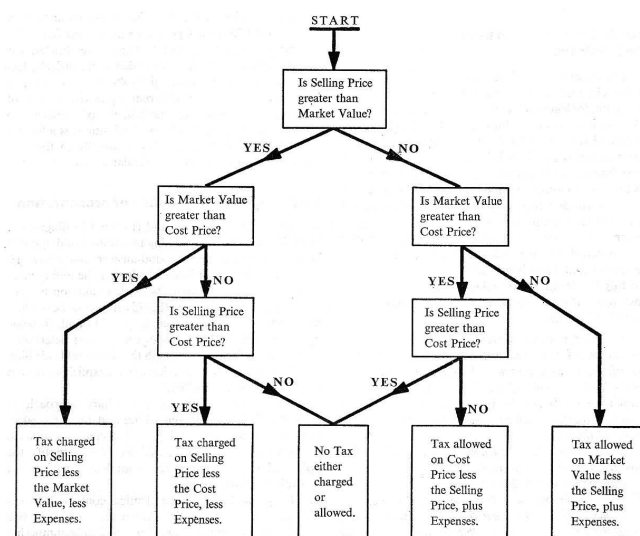
24 Wright (1988b), page 324.

Memory is a limited goal for most people, since writing is itself a memory tool.

## Outcomes from reading: memory, understanding and use

In my early career I was fortunate to work with one of the pioneers of visualisation in regulatory text, Brian Lewis. Working with colleagues Ivan Horabin and Chris Gane, his ‘ordinary language algorithms’ were influential in the 1960s and 70s.<sup>25</sup> These are flow charts which break down regulations into a series of yes/no questions, leading the reader to the correct application of the rules to their situation. They remain a useful technique, which should be among the solutions available in any pattern library for legal information design.

Figure 2. Ordinary language algorithms make visual connections but are not true diagrams – they provide pathways to follow but their overall shape contributes little to understanding. This example is from Lewis, Horabin and Gane (1967)



One important (and perhaps counter-intuitive) idea from this work is that visualisations may not have an explanatory role at all, but simply lead the user down a pathway to the answer. Ordinary language algorithms break down content into such small steps that no mental effort need be expended in trying to build a mental model of the whole. In fact one of their papers was entitled ‘Algorithms and the *prevention* of instruction’ (my emphasis).<sup>26</sup>

Lewis, Horabin and Gane make an important distinction between memory, understanding and use of documents. These outcomes are sometimes conflated in studies of document design (those, that is, that measure success through tests of comprehension or recall), but they are distinct goals for readers.

Memory is a limited goal for most people, since writing is itself a memory tool, and smartphones give us instant access to things which our ancestors might have memorised. For most of us who earn our living from our brains, it still underpins our job-related

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25 Lewis, Horabin and Gane (1967).

26 Horabin, Gane and Lewis (1967).

“Rather than pursue legal processes, [customers] preferred to appeal to moral obligations, using a company’s own dispute resolution process along with negative social media reviews.”

understanding and competence – but this may not stretch to memorising the termination clause of our mobile phone contract.

In many situations, understanding is also a limited goal. We regularly read and use signs when driving or walking, often gaining no understanding or memory of our route. We read the signs, use the information and immediately discard it. Steve Krug’s influential guide to the design of user interfaces is entitled *Don’t make me think*.<sup>27</sup> Just because we have been told something, it does not mean we now ‘know’ it.

### *Customers do not rely on the written word*

To find out more about what people who struggle with reading do with consumer contracts, we asked a group of local people from an adult education centre to use a home insurance policy document to find answers to specific questions. Unsurprisingly, no one read systematically and they saw the document as just one source of information, relying more on their general knowledge and their idea of what is reasonable or normal.

A more formal study by Franklin Snyder and Ann Mirabito<sup>28</sup> encountered a similar indifference to written terms of business among a more skilled group of readers. In a simulated study about a faulty laptop they found no difference in consumer attitudes related to the format of the sales terms (they compared a signed written agreement, click-wrap and shrink-wrap). This was the main focus of their study, but some other findings also reinforce the common sense view. Having little faith in their ability to understand the sales agreement, their participants distinguished between sellers’ moral and legal obligations. Rather than pursue legal processes, they preferred to appeal to moral obligations, using a company’s own dispute resolution process along with negative social media reviews. And in the case of events that could not specifically be predicted and incorporated in a precise legal clause, this is their only recourse: as we have seen when travel insurers initially resisted paying out for claims resulting from volcanic ash and coronavirus.

### *...and nor do companies*

It is unsurprising that consumers do not rely on written information, but it is more striking to find that the same is true of the other party to the communication – professional claims handlers in insurance companies.

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<sup>27</sup> Krug (2005).

<sup>28</sup> Snyder and Mirabito (2019).

“Before getting to the point of signing a contract, customers will have been exposed to generic messages about the supplier’s brand, and therefore its personality, trustworthiness and expected behaviour.”

The sociologist Étienne Wenger published a seminal study of information use in an insurance company claims department. He observed that, while we might assume that insurance would be managed according to rigid procedures, in reality much of the knowledge used by staff was not written down but was built and passed on within what he termed a community of practice.

The practices Wenger observed included the use both of explicit written information and tacit knowledge:

It includes what is said and what is left unsaid; what is represented and what is assumed. It includes the language, tools, documents, images, symbols, well-defined roles, specified criteria, codified procedures, regulations, and contracts that various practices make explicit for a variety of purposes. But it also includes all the implicit relations, tacit conventions, subtle cues, untold rules of thumb, recognizable intuitions, specific perceptions, well-tuned sensitivities, embodied understandings, underlying assumptions, and shared world views. Most of these may never be articulated, yet they are unmistakable signs of membership in communities of practice and are crucial to the success of their enterprises.<sup>29</sup>

### *The negotiation of meaning*

Wenger speaks of ‘the negotiation of meaning’ between the fixed (he calls it ‘reified’) knowledge contained in the documents, and participatory knowledge shared by group members. But a problem for the conversation between the two parties to an insurance contract is that they inhabit different knowledge spaces.

Before getting to the point of signing a contract, customers will have been exposed to generic messages about the supplier’s brand, and therefore its personality, trustworthiness and expected behaviour. Their negotiation of meaning may take in advertisement, brochures, websites, online reviews, and comparison websites. There may be endorsements from celebrities, experiences of friends, and conversations with sales staff.

And in the wider picture of how a claim or dispute might be dealt with, for the insurance company too (or a court in the event of litigation) the policy document is just one of several written sources. There are internal policy manuals, there are laws and regulations, and court judgements. So just as the customer’s informal sources are not obviously knowable by the supplier, these other documents are, for their part, out of the customer’s sight.

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<sup>29</sup> Wenger (1998), page 47.

Customer attitudes may range from cynical to brand-loyal – and they have a clear sense of fairness.

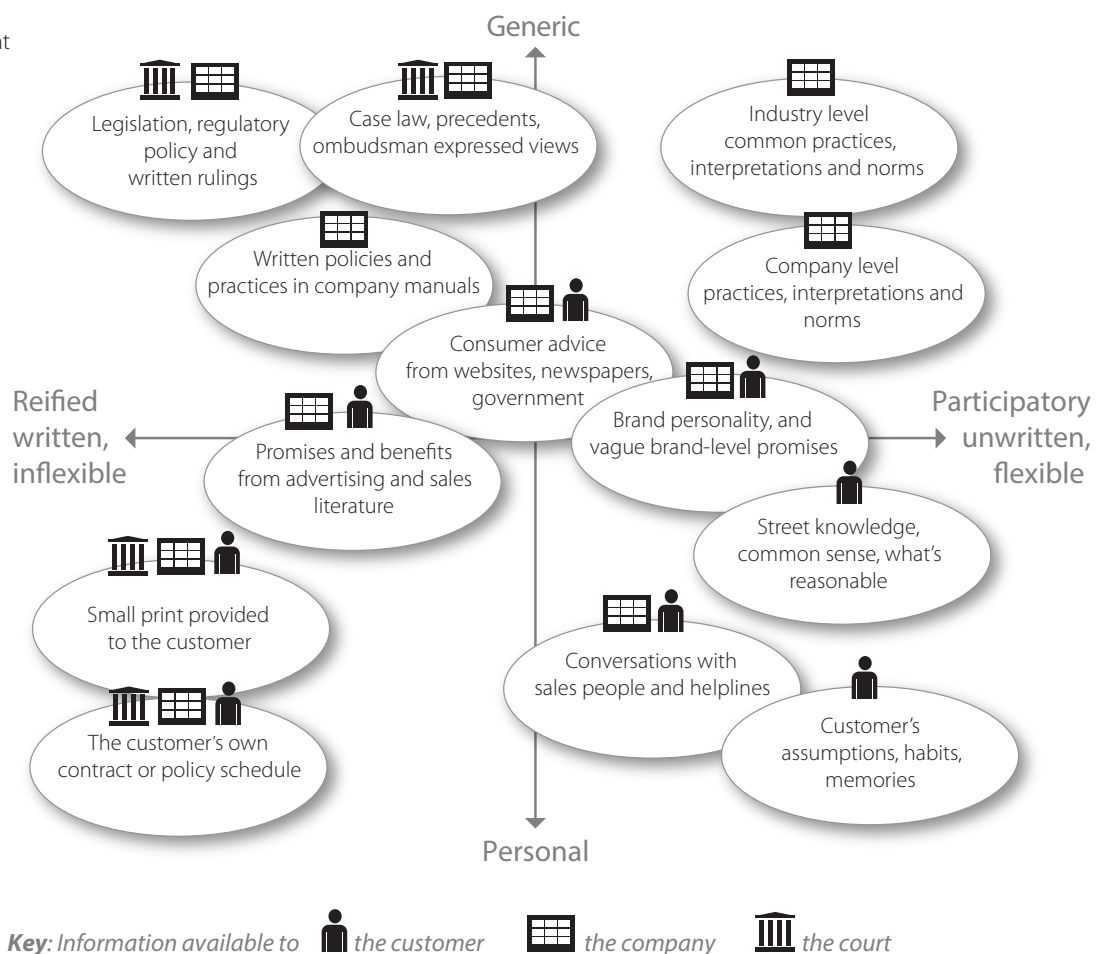
### Mapping information sources

Figure 3 ranges these various sources of information on two dimensions: on the vertical axis, from those that are generic and public to those that are specific or even personalised to a customer; and on the horizontal axis, from those that are in inflexible written form (reification) to those that are unwritten and flexible (participation).

The key participants in the conversation are the customer, the supplier or service provider ('the company') and, if there is a dispute, the court or regulator. The icons show how each has their own limited perspective.

The *customer* has certain information available in document form – their policy or contract, and related correspondence. They also have memories of the sales process, and their general knowledge and participation in society. They have no access to company documentation, and regulatory documentation will probably be out of view. Their attitudes may range from cynical to brand-loyal – and they have a clear sense of fairness.

Figure 3. Mapping the information sources relevant to a typical consumer contract.



‘...the average consumer is probably less well-informed, observant and circumspect than the average judge, or the civil servants who drafted the law.’

The *company* has access to most information sources, except what is in the customer’s head. However, different departments may well have different biases. Product teams and marketers want to develop features that differentiate them from competitors, while carefully defining or restricting them to ensure profitability. Legal teams need to ensure these are tightly defined and defensible, and customer experience or brand teams try to deflect criticism and create loyalty.

Depending on how it interprets its role, the *regulator* or *law court* has the most restricted view, particularly if the reifications alone are to be considered. In his paper on ‘myths about legal language’, Peter Tiersma contrasts two legal approaches to this:

... the legal mode of interpreting text is very different from how we interpret ordinary writing. Suppose that you are reading a book of some sort and come across an ambiguity. You might reread the text several times, examine the context, and then use whatever intuitions and information you have at hand to resolve it as best you can. You do not consciously apply rules of interpretation that someone taught you.<sup>30</sup>

Judges, on the other hand, tend to have very explicit rules about interpreting legal texts, especially statutes. An intentionalist judge may research a statute’s history, previous drafts, statements by sponsors on the floor of the legislature, committee reports, etc., each of which will carry greater or lesser weight. A textualist judge, on the other hand, will look only at the text itself, and perhaps some related texts, as well as dictionaries. He may also invoke certain canons of construction. In other words, an intentionalist judge does not simply rely on whatever information she has before her, but digs through often obscure archives for additional clues to a text’s meaning. A textualist judge, in contrast, refuses to consider certain types of information even if it is known to him.

The EU’s rules about transparency, though, cut across this distinction as soon as they depart from a simple injunction to use legible type and clear language – they refer to ‘the average consumer, who is reasonably well-informed and reasonably observant and circumspect’. This makes it clear that judges and regulators are obliged to consider not only the text or the intention of those who wrote the statute (or by extension, the contract), but what an average consumer is likely to understand by it – although it is not clear what they do with the fact that, as literacy statistics show us, the average consumer is probably less well-informed, observant and circumspect than the average judge, or the civil servants who drafted the law.

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30 Tiersma (2005).

“To be contract literate is to be able to read the situation as much as the words – to understand the rules of the game, and the motives of the other party.”

### *The role of mental schemas and inference*

Tiersma not only contrasts textualist and intentionalist judges, but he also contrasts both types of judges with ordinary readers who use ‘whatever intuitions and information [they] have at hand’ to interpret ambiguities.

Actually we should go much further than this: people do not just use inference and interpretation to manage ambiguity, but for much of their understanding of discourse. No text contains all the information needed to process it. Instead it relies on the recipient’s familiarity with concepts which are not explained. If I refer to a ‘bank account’, for example, I assume you know what a bank is, and what an account is. The term calls to mind a rich set of knowledge, experience and assumptions which enable you to process whatever I am saying about bank accounts.<sup>31</sup> This is a challenge for plain language advocates because the more they make explicit, the longer the text becomes, and the more there is for the reader to deal with. In a particularly notorious case, the UK tax authorities included three full A4 pages of notes to explain the term ‘bank account’ to tax credit applicants. Their motive was to explain to people without bank accounts why they needed them to receive payments.<sup>32</sup>

The problem for the drafter of contracts, assuming they are sincerely trying to communicate, is that mental models are not universal. I have already mentioned the problem of poor adult literacy, whereby people struggle to decipher text fluently, and to read purposefully and strategically. There is also recognition of specific literacies such as financial literacy, digital literacy, health literacy and legal literacy – we need a range of basic concepts and experiences to draw on when we read documents about such topics. The New Literacy Studies movement sees literacy as a social and cultural phenomenon rather than simply a cognitive competence.<sup>33</sup>

### *Cognitive accidents*

To be contract literate, then, is to be able to read the situation as much as the words – to understand the rules of the game, and the motives of the other party. But in modern commercial relationships this is not straightforward. Since the internet gives us access to near-perfect information, quickly revealing the cheapest price,

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31 Psychologists studying discourse comprehension refer to these knowledge structures as schemas or mental models. Or ‘schemata’ using the Greek plural. See Bartlett (1932), Anderson and Pearson (1984), McNamara, Miller and Bransford (1991).

32 HM Revenue & Customs ‘How to complete your tax credits claim form for 2005’ TC600 Notes 2005.

33 Barton, Hamilton and Ivanič (2000).

‘Most of the time we get away with not reading, and it is the sensible thing to do. But occasionally we trip.’

marketers respond by differentiating products through contract terms. So a flight or rail journey is now a commodity, and to maximise profits the transport operators charge more for features such as flexibility or late availability – all bound by contract terms.

Most of the time we get away with not reading, and it is the sensible thing to do. But occasionally we trip. Here’s a newspaper report typical of many, highlighting a crisis caused by a perfectly reasonable assumption:

A university professor who got off a train before his final destination was stunned when he was asked to pay £155 to leave the station...

...Professor E said: ‘Like most people, it did not enter my head that I was in default of the terms and conditions by getting off the train early.

‘Anyone would understand that you’d be liable to pay extra if you stayed on the train too long. But if you get off early, you have not used all the product you have paid for... Nobody could anticipate that you’d be at fault for getting off too early. That is madness.’

An East Coast spokesman said: ‘The terms and conditions of the Advanced Purchase First Class ticket, which Professor E had used, clearly state that breaking a journey en route, or starting from an intermediate station, is not permitted.

‘We have contacted Professor E ... and, as we accept this was a genuine mistake on his behalf, we have cancelled the excess fare he was charged on this occasion as a gesture of goodwill.’<sup>34</sup>

We might say that the Professor’s obsolete mental model of rail travel amounted to poor travel literacy. So specific literacies cut across the usual boundaries of education and social status.

Would more transparent terms and conditions have helped him? The train company stated that, in their view, the terms were in fact clear, and perhaps they were. But which of us even sees the small print when we buy a train ticket? And who reads a full car rental agreement at the airport while the queue behind us builds?

Instead, we trust in the reasonableness of other people and organisations. And when the world fails to work as we expect it to, we trip over – metaphorically speaking, that is, because in his incorrect but entirely understandable interpretation of the rules Professor E had what we might call a cognitive accident.

.....  
34 Cook (2010).

Figure 4. Steps outside the British Library, London.



We are very used to the concept of accident prevention in the physical world. Visiting the British Library in London, I noticed a sign on the steps which read CAUTION: STEPS. Most steps are obvious to us, and we do not blame others if we trip over. So why is there a sign to warn us about these ones? It is because the design of the library forecourt is visually confusing: a grid of white stone lines, only some of which are steps. Too many accidents were presumably reported and the library is carrying out its duty of care.

The people tripping on the steps are not toddlers – they are adults with many years of experience in using steps, but the visual information reaching their brain told them there was nothing to worry about here. It is the same for the Professor on the train – his lifetime’s experience of railways, his common sense, his idea of what is normal, led him to the wrong conclusion.

“When buying an over-the-counter medicine we learn to discount the promises made on the pack, and at the same time moderate the doom-laden list of side effects in the leaflet.”

#### *When inference goes wrong*

Inferences are also made about the motives we attribute to people communicating with us. As Figure 1 shows, these include people trying to sell to us, people trying to advise us, and people trying to define or restrict what is promised to us. When buying an over-the-counter medicine we learn to discount the promises made on the pack, and at the same time moderate the doom-laden list of side effects in the leaflet. As a simple example of this, I recently bought some furniture online and was promised that delivery would be ‘pre-booked ... for a day that is convenient with you’. Needless to say, the small print then said ‘Delivery dates notified to you are for guidance only’. I decided that taken together it meant ‘we’ll try our best’.

Given the user is not present where the contract is being drafted, it takes a special effort to give them a voice. ”

However, the furniture company also promised that ‘This item will be put in position and unpacked by our drivers. All packaging will be taken away.’ From this promise I made the assumption that it would be left in a functional state, and so I was surprised when it was delivered as a flatpack.

This leads me to another aspect of inference, explained by a theory from the field of pragmatics. Grice’s Cooperative Principle<sup>35</sup> suggests that participants in a dialogue are entitled to assume that each is cooperating in an effort to communicate. He identifies four maxims of cooperative conversation: *quality* – what is said is true; *quantity* – what is said is adequate; *relation* – what is said is relevant; and *manner* – what is said is as clear as it can be.

As an example, if we ask ‘Would you like a game of tennis?’ we may get the seemingly unconnected reply ‘It is raining’. This flouts the relation maxim, as on a literal level it appears not to be relevant to the question. However, because we assume cooperation and that the reply is therefore relevant, we look for a valid inference (called an implicature by Grice) – in this case, that the game is undesirable in the rain. Flouting is obvious, intentional, benign and mostly unproblematic. But when it is covert, and therefore potentially duplicitous, it is termed ‘violating’. In the case of my furniture, the quantity maxim was violated, because it was not stated that the item was in flatpack form. So I too had a (minor) cognitive accident. In practice, then, it is not enough to check that a document is clear and contains no false statements – the possibility of false interpretations also has to be considered if cognitive accidents are to be prevented.

## Preventing cognitive accidents

How, then, might we expect the railway and furniture company to exercise the same duty of care as the library? Legible type and clearer language would not have helped the Professor on the train. He thought he was being perfectly observant. A far more transformative solution is needed, and to arrive at this we need to look at processes as well as products. If a new genre of reasonable, usable contracts is to evolve, genre theory suggests that it will have to reflect the needs of both parties – and in particular the need of users to access information for their own specific purposes. Given the user is not present where the contract is being drafted, it takes a special effort to give them a voice.

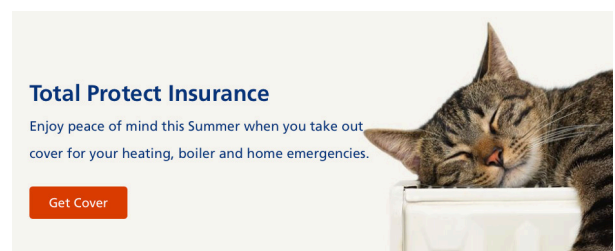
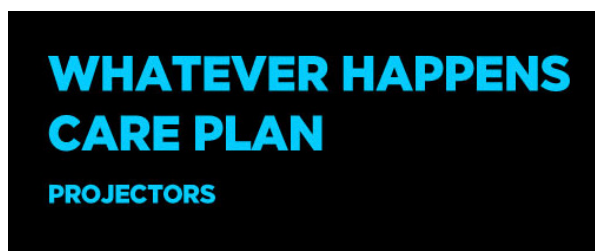
.....  
35 Grice (1975).

Design thinking<sup>36</sup> describes a set of methods and attitudes that place the user at the centre of product development. Along with the concept of proactive law,<sup>37</sup> it is at the heart of the emerging field of legal information design. Design thinking methodologies include techniques which originated in quality management and systems thinking, as well as from the various design specialisms. Each practitioner has their own set, and I will highlight just a few here.

### *Cross-functional teams*

Our talk of schemas, specific literacies and inferences means that a wider range of considerations has come into view than just the legally framed contract or disclosure document. As Figure 1 indicated, the consumer never sees a contract on its own, but only having first encountered home pages, sales literature, and similar positive, benefit-centred messages. These other messages frame their expectations of the product, and therefore what they would expect to find addressed in the contract.

Encouraged by consistent branding, consumers attempt to ascribe a single personality to these communications and a single, cooperative conversation. However, in reality the separate messages they see will come from different parts of an organisation – such as marketing, sales, legal, customer services, product and billing departments. So a single coherent conversation with customers requires a cross-functional team, and it requires processes that inform the team about the customer's perspective.



For example, if an insurance product is marketed with an optimistic brand name such as 'Total Protect Insurance' (EDF Energy) or 'Whatever Happens' (Currys, the electrical goods store), the contract drafters and the marketing team would have to work together to quickly and prominently define what this really means, rather than rely on a standard force majeure clause in a tiny font. Given the unlikelihood of customers reading the contract before signing, they may even question the wisdom or fairness of these brand names.

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<sup>36</sup> Liedtka (2018).

<sup>37</sup> Siedel and Haapio (2010).

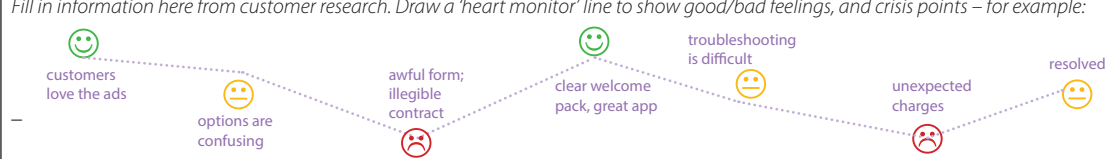
“No legal team should be expected to sign off contract wording without an awareness of the messages which customers will see on its packaging and promotion.”

No legal team should be expected to sign off contract wording without an awareness of the intention of the product, and the messages which customers will see on its packaging and promotion.

### Customer journeys

A customer journey map is a tool for revealing key messages and experiences across time. It should follow a time-line of the customer's experience, from initial promises to delivery, including crisis points known as 'moments of truth' when the true personality of the brand is seen in action. The format is flexible and should emerge from team workshops. The example in Table 1 is based on one I have used in a project, but there is no set format, and they are often more graphic than this.

Table 1. Example of a customer journey map

CUSTOMER FOCUS		JOINING				BUSINESS AS USUAL		MOMENTS OF TRUTH
	Customer journey	Become aware	Compare options	Apply	On-boarding	Use product	Pay bills	Problems, Claim, Leaving, Upgrade, etc
	What customers need	Awareness of brand and product	Consistent information for comparison Alerts about restrictions, risks etc	Clear form Reasonable declaration Unexpected terms highlighted	Clear instructions Reminder of options chosen	Reference guide Alerts to issues	Explanation of charges Regular reminder of the deal	Reference guide Clear options Advice Complaints process
	What customers experience	Ads, posters, pop-ups etc	Website, direct mail, etc	Form and contract (paper or online).	Welcome pack or email, set up online account	Use of product	Bill, app, email	Website/app
	How customers feel	Fill in information here from customer research. Draw a 'heart monitor' line to show good/bad feelings, and crisis points – for example: 						
COMPANY FOCUS	Responsibility	Advertising/branding	Marketing/sales	Operations			Billing	Customer service
	Focus	Brand promises	Benefits, features, advantages	Efficiency Compliance			Accuracy Clarity	Problem solving Customer retention
	Impact on contract design	The brand frames customer assumptions about the relationship	The contract sets the parameters for features	Contract available to read, and signed at this point. How does it affect expectations created by marketing and sales messages? Are there counter-intuitive or unreasonable clauses customers won't expect to be there?			Contract sets parameters for use of product and payment.	Customer's rights and obligations defined in contract. Can they find and understand them?

“The customer journey map tracks the relationship between promise and delivery.”

The customer journey map tracks the relationship between promise and delivery: how do the initial promises (benefits, options) appear further down the line – in the set-up process, in the contract, in the bill? Setting up a project room with these documents on the wall allows the team to see the whole picture. And by adding in press and social media comments, it becomes easier to understand the customer’s wider perspective and anticipate their attempts to negotiate meaning between company-generated information and influences from elsewhere.

### *Risk assessment*

Accident prevention is based on risk assessment, something that is routinely carried out in physical environments. Hazards are identified, based on accident reporting, professional judgement and regulation. Their potential impact is assessed – who might be harmed and how seriously. Finally, precautions are identified.

Risk assessment has transformed the safety of factories, transport, and numerous aspects of modern life. Precautions cannot just consist of warnings, which deflect liability as much as they seek to inform. Physical solutions are mandated too – for example, hard hats or barriers.

Some years ago we were commissioned by a telecommunications company to review its use of small print. There was tension between the marketing and legal teams – the marketers wanted to make simple promises, but the legal team were responsible for checking them against the contracts customers would in reality be offered for the product.

Through a survey of common industry practices we found that there was a range of ways in which promises and disclosures were integrated (or not). At one end of the spectrum was classic boilerplate – completely separate from the marketing messages, so the customer would have to work very hard to map the one on to the other. There is a high risk of these not being read or understood. At the other end there was almost complete integration – just a few footnotes (it was obviously a much simpler marketing proposition).

In between these options we found a range of strategies to make contracts clearer to users. Some classic contracts had been redesigned to be more suitable for reading, with a larger font and headings. There were various hybrid forms which combined traditional boilerplate with highlighted key terms, in bold type, or grouped together in summary panels. And at the more

Table 3. A spectrum of risk to the consumer from contract formats..

Traditional boilerplate	Improved contract, designed for reading.	Hybrid contract	Considerate contract	Total integration
Tiny font, legal language, little or no navigation.	Legible font, headings for navigation, improved language.	Improved contract, with content ordered by relevance to customer.. Some key terms explained.	Key contract terms expressed from user's viewpoint (for example, as FAQs).	No separate contract – all messages integrated.
<b>HIGH RISK</b>	<b>MEDIUM RISK</b>	<b>MEDIUM-LOW</b>	<b>LOW RISK</b>	<b>LOW RISK</b>
Pointless and unacceptable. If it's genuinely not relevant dump it online with a clear link.	Better because it's readable. But still not organised around customer needs.	This may be as good as it gets for complex products.	Usually part of a hybrid contract, as there will be required content which is less relevant.	Mostly unattainable in practice except for very simple offers.

customer-considerate end of the spectrum, they were structured as FAQs, or only the key ones were included, with the rest available online

We proposed that since most of the better options involved an implicit risk assessment (for example, to identify what terms need highlighting), this could be formalized and made the basis for harmonising marketing and contract documents. Risks were defined as (1) damage to customers if not understood and (2) damage to the fulfilment of marketing or brand promises, and therefore to the company's reputation. This is in contrast to the traditional legal view of risk, which is tied to legal certainty<sup>38</sup> – and explains why traditional boilerplate is ever-expanding in an effort to drive out uncertainty and deflect liability.

Margaret Jane Radin<sup>39</sup> argues for a radically different approach to boilerplate, which she argues is inappropriately categorized as an aspect of contract law:

Receipt of boilerplate is often more like an accident than a bargain. What follows from this fact for legal oversight of boilerplate? Bargains come under contract law; accidents come under tort law. (page 197)

She argues that unfair boilerplate is in effect a defective product, and that relationships regulated by it

are more like the relationship between the manufacturer of a product and the end-user who might wish to claim that the product is defective and has caused him injury...

.....

<sup>38</sup> The legal scholar Tobias Mahler has focused on legal risk, proposing a system of icons to alert readers to different kinds of risk. See Mahler (2007, 2010)

<sup>39</sup> Radin (2013).

“Unfair boilerplate is a sign of a defective product.”

“It is hard to preserve the fiction that contracts can be read and understood once you have watched actual users looking baffled.”

Risk assessment is central to product safety. No organisation that cares about its reputation wishes to harm its customers – which is why, like the train operator in the case of Professor E, they usually back down when challenged by journalists. So risk assessment should be part of the contract drafter’s toolkit whether or not Radin’s vision represents the future.

We included risk assessment in our response to a UK government consultation on terms and conditions.<sup>40</sup> Taken seriously it should also involve incident reporting – companies should log evidence that comes to light that customers have misunderstood their contract and be able to demonstrate that they have made efforts to improve it.

### *User research*

When face to face communication goes wrong it is often obvious to the participants through puzzled looks or questions, and misunderstandings are quickly identified. But distanced communication requires a special effort to get feedback.

Most major brands, and many government agencies too, research their customers’ needs and preferences extensively. Websites and apps are usually tested with users, and in those contexts it is relatively easy to analyse patterns of use after launch. These activities can provide an existing infrastructure for customer research on contract design: extra questions just need to be added.

User research has two main functions: it alerts you to specific issues that need addressing; and it also builds general insight about users among the development team. It is hard to preserve the fiction that contracts can be read and understood once you have watched actual users looking baffled. This insight need not only come from actual customers. A number of the available design thinking methodologies – including customer journey mapping – provide ways for designers to more easily imagine the user experience and build empathy.<sup>41</sup>

### *Building a critical tradition: pattern libraries, benchmarking, reviewing*

It’s common to show examples of effective design as inspiration for new projects. But taken out of context, it is tempting to copy their surface features without understanding the thinking behind them. Design patterns address this problem.<sup>42</sup> They are typical solutions to

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40 Waller (2017). Credit for the risk assessment concept is due to Jenny Waller who was a key member of the team working for our telecommunications client in 2006.

41 Pontis (2018).

42 Rossi, Ducato, Haapio and Passera (2019).

Table 4. A design pattern from a project to simplify commercial contracts.

Name of the pattern	Skimmable headings
What is it?	Frequent headings that stand out so the reader can move quickly through a document to understand its structure and access its content. There should be one for each clause or paragraph, acting as a layered explanation.
What problem does it solve?	Skimmable headings help people build a context for their reading by skimming through a document before reading more closely. And they help people search for specific answers to their questions
When to use it?	Use them for content you want people to actively engage with. Ideally, skimmable headings should connect with each other to tell a story.
Why use it?	Effective readers engage actively with a document, reading with purpose and monitoring their own understanding as they read. Skimmable headings help them to understand why the document creator has provided the content, and how it is structured.
Where to use it?	Any complex document such as contracts, terms & conditions, and policies.
Exemplar	<p>Shell's new commercial contracts use skimmable headings that give the gist of the clause content (or sometimes the question it answers).</p> <div> <div> <p><b>8 Health and safety and environmental requirements</b></p> <p><i>What to do if there is a pollution event</i></p> <p><i>You are responsible if you damage our equipment</i></p> <p><i>We both agree to comply with environmental laws and policies</i></p> </div> <div> <p>8.1 If a Pollution Event occurs:</p> <ul style="list-style-type: none"> <li>we may at any time, take reasonable steps to control and stop the Pollution Event, remove the escaped Marine Lubricants and clean the affected area and you will provide all reasonable assistance with those steps;</li> <li>if the Pollution Event is caused by an act or omission of a Party, the Party who has caused the Pollution Event must compensate the other Party (including the Delivery Company as applicable) for the cost of any steps taken;</li> <li>you will supply us, or the Delivery Company, with any documents and information concerning the Pollution Event or any programme for the prevention of a Pollution Event as we, or the Delivery Company ask you for, or that are required by any applicable law.</li> </ul> <p>8.2 You will be responsible for the proper use, maintenance, and repair of any of our equipment that you or your agents damage during the Delivery. You will immediately inform us of any problems with the equipment which occur during the Delivery.</p> <p>8.3 The Parties confirm that they will comply with all applicable environmental laws and government regulations and that they have environmental policies in place concerning their Marine Lubricants processes.</p> </div> </div> <p>Source: Shell Marine Lubricants Terms &amp; Conditions. © 2018 Royal Dutch Shell plc. Used with permission. Design: Rob Waller</p>

common problems, presented with explanations about their typical uses, limitations and alternatives. Table 4 shows an example.

Collected as pattern libraries, they provide a coherent argument about how to address user needs at various levels of engagement and at various points in a customer journey. They also build the discipline by enabling discussion of a common set of principles and exemplars.<sup>43</sup>

Pattern libraries need to be seen as just one part of a developing critical tradition. Legal information design is still an immature discipline, and needs a shared vocabulary, and way of thinking. This is being built up remarkably quickly through the efforts of key pioneers, conferences, and pathfinder projects. Organisations are naturally conservative and risk averse, and legal departments especially so, but each innovative project that sees the light of day

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<sup>43</sup> For examples of pattern libraries for contract design see Waller et al (2016) and the IACCM Contract Design Pattern Library <<https://contract-design.iaccm.com>> accessed 29 July 2020.

becomes a precedent for others to follow. Ideas which would have been a major battle twenty years ago are now waved through – recent examples in my own practice include informal language, diagrams, marginal helps, FAQ-based structures and the removal of spotty bold type for defined terms. Benchmarking exercises and award schemes help to build the critical tradition, and make best practice more widely available.




## Toward a new contract design genre

What might a future contract genre look like? In many cases it won't be identifiable as a separate document, because, in the spirit of proactive law and effective information design, much of its content will be integrated with other customer communications.

I envisage three layers, described in Table 4. The Action layer is at the surface and is entirely about the user and their needs: the headings they need to skim read and navigate, and warnings about high-risk information they might otherwise miss.

The core layer is the Explanation layer which makes every effort to communicate concepts which customers need to understand. A legally pure text will not cut it here unless its relevance and meaning is completely clear. Explanation may be best done with diagrams,

Table 4. A layered information architecture for future contracts

	 <b>Action layer</b>	 <b>Explanation layer</b>	 <b>Technical layer</b>
<i>What is it for?</i>	For skim reading	For understanding	For research, when dealing with a problem, or asking a question
<i>What is in it?</i>	At-a-glance information requiring little effort Headings for navigation Urgent warnings	Engaging explanations integrated with marketing messages and the application process	A reference guide
<i>Example techniques</i>	Headings Icons Alerts	Clear text written from the user's perspective Frequently Asked Questions Decision support flowcharts or apps Infographics, videos, comic strips, etc	Clear access structure Legible type Headings
<i>Knowledge base</i>	User-centred design, behaviour change, literacy, wayfinding,	Instructional design, journalism, graphic design	Technical communication, reference book design.

“...any promise or product description should have a contractual status, rather than being potentially over-ruled by a separate set of small print. So no more Free\* Flights.”

“We need a new concept of ‘risk legibility’ which describes how well risks are assessed and communicated.”

pictures, comic strips or video clips – whatever it takes to explain, not whatever might one day be required in litigation.

The Technical layer is a repository for whatever is left that the technical and legal teams need to say in a correct and complete way, but which the user does not immediately need. It should be as clear as possible, and well organised for ease of retrieval, but it is relegated to the background because it is assessed as low risk or less relevant to the user.

Some essential qualities of the new genre include:

- *Integration:* The content of the small print that is most relevant to customers is integrated with other communications along the customer journey. This means that *any* promise or product description should have a contractual status, rather than being potentially over-ruled by a separate set of small print. So no more Free\* Flights. Contracts would include clauses explaining each specific marketing promise, linked to specific actions such as warranty claims, termination or complaints.
- *Layering:* Each layer drills down to the one below, for people who need more depth of explanation or a legal definition. But not every lower level clause has a corresponding explanation or icon at the higher levels.
- *Risk-legibility:* We need a new concept of ‘risk legibility’ which describes how well risks are assessed and communicated. Where the risk assessment indicates the need, the Action layer is called in to alert people to danger.
- *Usability at every level.* The current small print would become the technical layer, but printed legibly, written clearly and formatted useably. There is no place for information that cannot possibly be read.
- *Targeting:* Everything in a contract document should be relevant to the customer who gets it, with no distracting references to options and products they do not have, or countries they do not live in.

## Is there hope?

How much hope should we have for contracts that most people will read and understand? There is currently an impressive effort to legislate for transparency, to research it, to define it and to create it in practice.

‘When everyone wants simplicity, when laws require it, when experts seek it but progress is scant, we should stop demanding success and start explaining failure.’

*Omri Ben-Shahar and  
Carl Schneider*

However, we have seen that for a large number of consumers who struggle with reading (or with motivation to read contracts) this effort will probably be in vain. The Behavioural Insights Team in the UK recently published evidence-based guidance on how to improve consumer understanding of contracts<sup>44</sup> – they reported impressive improvements ... impressive, that is, unless you realise that (to pick just one of their 18 studies) a 34% improvement in comprehension from using icons took us from 42% to 57%. It appears the other 43% of respondents were not helped – not surprisingly since this is roughly the proportion of the population below Level 3 in functional literacy tests.<sup>45</sup> It is unfair to make their rights depend on long written documents.

Omri Ben-Shahar and Carl Schneider<sup>46</sup> remark that ‘When everyone wants simplicity, when laws require it, when experts seek it but progress is scant, we should stop demanding success and start explaining failure.’ They regard boilerplate-style disclosures as a failed strategy but acknowledge that alternatives are hard to identify. But they argue that this is no reason to continue, pointing out that physicians eventually stopped using the useless treatment of bloodletting, even though at the time they had no alternative cures. They urge us to ‘abandon the unreal world in which people tirelessly sponge up disclosures and diligently make informed decisions’, arguing that people seek advice more than education.

If fairness is the goal, it is worth considering the principles-based regulatory regime used for financial services in some countries, such as Treating Customers Fairly in the UK. Instead of a detailed rulebook, there is a general mandate to communicate clearly, alongside other mandates to sell appropriate products that deliver on promises.<sup>47</sup> It is policed by the regulator, and over time, a form of case law builds. It is by no means perfect, but one source of hope is that customer signatures on the small print did not protect banks from the mis-selling scandals that hit them so hard. Future compliance officers will not just sign off the wording of product descriptions and contracts, but the processes and design thinking that led to them – including, it is to be hoped, the systems in place for cognitive accident prevention.

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<sup>44</sup> Behavioural Insights Team (2019). I have reviewed this project in the Simplification Centre blog: <[www.simplificationcentre.org.uk/blog/improved-but-nowhere-near-ok](http://www.simplificationcentre.org.uk/blog/improved-but-nowhere-near-ok)> accessed 22 June 2020

<sup>45</sup> Organisation for Economic Co-operation and Development (2013).

<sup>46</sup> Ben-Shahar and Schneider (2014), page 137.

<sup>47</sup> Georgosouli (2011).

## References

- Anderson R and Pearson D, (1984) 'A Schema-Theoretic View of Basic Processes in Reading Comprehension' in David Pearson (ed) *Handbook of Reading Research*, Longman.
- Bakos Y, Marotta-Wurgler F and Trossen D, (2014) 'Does Anyone Read the Fine Print? Consumer Attention to Standard-Form Contracts' *Journal of Legal Studies* 43:1.
- Bartlett FC, (1932) *Remembering: an experimental and social study*, Cambridge University Press
- Barton D, Hamilton M and Ivanič R, (2000) *Situated Literacies: Reading and Writing* Routledge.
- Bateman J, Hiippala T and Wildfeuer J, (2017) *Multimodality: Foundations, Research and Analysis – a Problem-oriented Introduction*, De Gruyter Mouton.
- Behavioural Insights Team (2019) *Improving consumer comprehension of online contractual terms and privacy policies*, Technical Report for the Department for Business, Energy and Industrial Strategy, July 2019.
- Ben-Shahar O, (2009) 'The Myth of the "Opportunity to Read" in Contract Law' *European Review of Contract Law* 5:1.
- Ben-Shahar O, and Schneider C, (2014) *More than You Wanted to Know: The Failure of Mandated Disclosure*, Princeton University Press.
- Benoliel U and Becher S, (2019) 'The Duty to Read the Unreadable' *Boston College Law Review* 60:2255.
- Britton B and Glynn S, (1987) *Executive Control Processes in Reading*, Lawrence Erlbaum Associates.
- Cook P, (2010) '£155 for getting off train a stop early' *Northern Echo* (Darlington, 27 September 2010). <[www.thenorthernecho.co.uk/news/8415942.155-for-getting-off-train-a-stop-early](http://www.thenorthernecho.co.uk/news/8415942.155-for-getting-off-train-a-stop-early)> accessed 28 December 2019.
- Creative Commons, 'About the Licenses' <[creativecommons.org/licenses](http://creativecommons.org/licenses)> accessed 28 December 2019.
- Dator J, (A cartoon) *The New Yorker* (New York, 28 October 2019) <[www.newyorker.com/cartoon/a21928](http://www.newyorker.com/cartoon/a21928)> accessed 20 January 2020.
- Georgosouli A, (2011) 'The FSA's "Treating Customers Fairly" (TCF) Initiative: What is So Good about It and Why It May Not Work' *Journal of Law and Society* 38:405.
- Grice HP, (1975) 'Logic and Conversation' in Peter Cole and Jerry L Morgan (eds), *Studies in Syntax and Semantics III: Speech Acts*, Academic Press.
- Hern A, (2015) 'I Read All the Small Print on the Internet and It Made Me Want to Die' *The Guardian* (London, 15 June 2015) <[www.theguardian.com/technology/2015/jun/15/i-read-all-the-small-print-on-the-internet](http://www.theguardian.com/technology/2015/jun/15/i-read-all-the-small-print-on-the-internet)> accessed 27 December 2019.
- HM Revenue & Customs (2005) 'How to complete your tax credits claim form for 2005' *TC600 Notes*
- Horabin I, Gane C and Lewis B, (1967) *Algorithms and the Prevention of Instruction*, Cambridge Consultants (Training) Limited.

- IACCM, Passera S and Haapio H, 'Flowchart' (IACCM Contract Design Pattern Library) <<https://contract-design.iaccm.com/flowchart>> accessed 28 December 2019.
- Knapp C, (2015) 'Is There a "Duty to Read"?' 66 *Hastings Law Journal* 1083.
- Krug S, (2005) *Don't Make Me Think: A Common Sense Approach to Web Usability*, 2nd edition, New Riders.
- Lewis B, Horabin I and Gane C, (1967) *Flow Charts, Logical Trees and Algorithms for Rules and Regulations*, HMSO <[www.simplificationcentre.org.uk/resources/lewis-horabin-gane-1967](http://www.simplificationcentre.org.uk/resources/lewis-horabin-gane-1967)> accessed 20 December 2019.
- Liedtka J, (2018) 'Why Design Thinking Works' *Harvard Business Review* (September-October 2018) <[hbr.org/2018/09/why-design-thinking-works](http://hbr.org/2018/09/why-design-thinking-works)> accessed 30 December 2019.
- Masson M and Waldron MA, (1994) 'Comprehension of Legal Contracts by Non-Experts: Effectiveness of Plain Language Redrafting' *Applied Cognitive Psychology* 8:67.
- Mahler T, (2007) 'Defining Legal Risk' in *Proceedings of the Conference 'Commercial Contracting for Strategic Advantage – Potentials and Prospects'*, Turku University of Applied Sciences <[ssrn.com/abstract=1014364](http://ssrn.com/abstract=1014364)> accessed 20 December 2019.
- Mahler T, (2010) Legal risk management – developing and evaluating elements of a method for proactive legal analyses, with a particular focus on contracts. Doctoral Thesis. Faculty of Law, University of Oslo, Oslo.
- McNamara T, Miller D, and Bransford J, (1991) 'Mental models and reading comprehension' in Rebecca Barr and others (eds), *Handbook of Reading Research* Vol II, Longman.
- Organisation for Economic Co-operation and Development, (2013) *OECD Skills Outlook 2013: First Results from the Survey of Adult Skills* (OECD Publishing 2013) <<http://dx.doi.org/10.1787/9789264204256-en>> accessed 20 December 2019.
- Organisation for Economic Co-operation and Development, 'Survey of Adult Skills (PIAAC)' <[www.oecd.org/skills/piaac/](http://www.oecd.org/skills/piaac/)> accessed 29 December 2019.
- Phillips T, (2014) 'Are You Baffled by the Financial Jargon that Costs the Average Person £428 a Year?' *The Mirror* (London, 3 September 2014) <[www.mirror.co.uk/money/city-news/you-baffled-financial-jargon-costs-4159124](http://www.mirror.co.uk/money/city-news/you-baffled-financial-jargon-costs-4159124)> accessed 20 December 2019.
- Pontis S, (2018) *Making Sense of Field Research: A Practical Guide for Information Designers*, Routledge.
- Radin MJ, (2013) *Boilerplate: The Fine Print, Vanishing Rights, and the Rule of Law*, Princeton University Press.
- Rossi A, Ducato R, Haapio H and Passera S, (2019) 'When Design Met Law: Design Patterns for Information Transparency', *Droit de la consommation – Consumentenrecht (DCCR)* 1:79.
- Schwartz MS (2019) 'When not reading the fine print can cost your soul' NPR (8 March 2019) <<https://www.npr.org/2019/03/08/701417140/>>



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If you wish to cite this report please use the following bibliographic description:

Waller R (2020). *Contract design for humans: preventing cognitive accidents*. Technical Paper 16. London: The Simplification Centre.

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when-not-reading-the-fine-print-can-cost-your-soul> accessed 12 December 2019.

Siedel G and Haapio H, (2010) *Proactive Law for Managers: A Hidden Source of Competitive Advantage*, Taylor & Francis.

Snyder F and Mirabito A, (2019) 'Boilerplate: What Consumers Actually Think about It' *Indiana Law Review* 52:431.

Tiersma P, (2005) 'Some Myths about Legal Language', *Loyola-LA Legal Studies Paper No. 2005-26*, 29 <<https://ssrn.com/abstract=845928>> accessed 21 January 2020.

Waits T, 'Step Right Up' in the album *Small Change* (Asylum Records 1976).

Waller R, (2017) *Terms and conditions: our response to the government's consultation*. Simple Action 4. The Simplification Centre

Waller, R, Waller J, Haapio H, Crag G, and Morrisseau S (2016), Cooperation through clarity: designing simplified contracts, *Journal of Strategic Contracting and Negotiation*, 2:1/2, 48–68.

Wenger É, (1998) *Communities of Practice: Learning, Meaning, and Identity*, Cambridge University Press.

Wright P, (1988a) 'Functional Literacy: Reading and Writing at Work' *Ergonomics* 31:265.

Wright P, (1988b) 'The Need for the Theories of NOT Reading: Some Psychological Aspects of the Human-Computer Interface' in Ben AG Elsendoorn and Herman Bouma (eds), *Working Models of Human Perception*, Academic Press.