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Disclosure for real humans

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Abstract: Modern consumers typically face complex goods and services. In the interest of customer protection, these companies are asked to disclose information about the products and consumers are typically required to indicate their understanding of the information provided. In truth, consumers seldom consult, even less understand the information provided. I present here the state of evidence about how commercial disclosure actually works (or rather does not work) with consumers characterized with human limitations in information processing. I discuss ways to improve disclosure regulation to improve customer protection.

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> *"In an information-rich world, the wealth of information means a dearth of something else: a scarcity of whatever it is that information consumes. What information consumes is rather obvious: it consumes the attention of its recipients. Hence a wealth of information creates a poverty of attention and a need to allocate that attention efficiently among the overabundance of information sources that might consume it."* (Simon, 1971)
>
> *"In theory, consumers read all their contract terms and sellers respond by competing over those terms, just as they compete over price. That is why we enforce contracts; we assume the market will discipline their contents. In practice, however, most consumer contracts go unread. The promised competition never emerges, and sellers insert terms unrestrained by market forces – confident that consumers will never even see them, let alone decide whether to accept them."* (Gibson, 2018)

In a few decades, the current framework for consumer protection will certainly be seen as having strangely relied on a legal fantasy. In this fantasy, in the interest of the customers, companies are requested to provide relevant information about their goods and services. This information, disclosed in 'terms and

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conditions' and detailed ('boilerplate') contracts, ensures that customers make informed decisions.

Unfortunately, the reality does not bear much resemblance to this fantasy. In a recent Deloitte report (Lee, 2017), 91% of people surveyed in the USA admitted not reading the terms and conditions they agree to. This number reached 97% for younger people aged 18–34. These numbers will not surprise most readers. In fact, these self-declared admissions are likely to be underestimates. Evidence from observations (not self-declaration) points to even lower numbers. In a recent experiment where researchers created a fake social networking site for people to register, its terms and conditions purposely included preposterous conditions such as giving up one's first-born child as payment and passing all of the user's personal information to the US National Security Agency. The average time spent reading the terms and conditions was 51 seconds and 98% of the participants ended up accepting them. Data from real consumers' behaviour point to the proportion of 'informed' consumers being very close to zero. Cate (2006) reveals that data from Yahoo in 2002 show only 0.3% of users accessing its privacy policy. Tracking the Internet browsing behaviour of 48,154 monthly visitors to 90 online software companies, Bakos *et al.* (2014) found that only 0.1–0.2% of potential buyers access the End User Licence Agreements for at least 1 second.

Given this reality of 'informed consent', the sentence 'I have read and understood the terms of service' has been described as the 'biggest lie on the Internet' (Obar & Oeldorf-Hirsch, 2018). These are make-believe requests: companies purposely and knowingly ask customers to validate statements that are not true.

How did we get here and what can we do about it? In this article, I cast a light on this situation using what we know from economics research. I describe the ideal world for which the current framework is intended to work and how the reality of human consumers makes such a framework dysfunctional and harmful to those consumers' rights. The article then discusses the way forward to improve future regulation for information disclosure in markets with real humans.

Competition with informed customers versus confusopoly

Economists like market mechanisms, and for good reasons. Under the right circumstances, markets have desirable properties as institutions to coordinate economic activity: resources are allocated where they are needed the most, and companies compete for customers by providing good quality at a reasonable price.

In the best scenario, competition not only ensures that prices are kept low, but also ensures that firms fully inform their customers about the

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characteristics of their products (Grossman, 1981; Milgrom, 1981). The reasoning is simple: the best firms have an interest in fully revealing the quality of their product in order to differentiate themselves from lower-quality firms. This competition puts pressure on average-quality firms to do the same in order not to be associated with the worse-quality firms. By that process, companies compete on price and quality and provide full information to their customers about their products. The fully informed customers can make consumption choices based on their personal preferences.

Such a vision may have some validity for some markets, in particular when products are bought and experienced frequently and for which the relevant information can be learned and processed over time. However, it has been known for a while that this vision does not characterize a large number of markets. While prices tend to be easily observable, the quality of the product may not be easily observable and comparable across companies. The quality of a product is typically made of a range of characteristics and how these characteristics relate to the customers' preferences. For complex products, information about these characteristics may be costly to retrieve and to interpret in order to make economic decisions.

As pointed by Carlton and Perloff (2005), the customers' search for information will be the object of a cost–benefit analysis, and "it does not pay for consumers to collect information beyond the point where the marginal benefit equals the marginal cost of collecting it" (p. 441). As a consequence, the proportion of customers who choose to stay (rationally) uninformed increases with the costs required to be informed.[1]

It is well known in industrial organization that the existence of search costs to compare prices allows firms to eschew the pressure from competition and to charge prices above the competitive market price (Diamond, 1971). With informational search cost, companies may free themselves from the pressure of market competition and instead benefit from a 'confusopoly': a situation where confused consumers struggle to compare companies' products and end up paying more (or getting lower-quality products) than under transparent market competition (Kalaycı, 2016). In his study of health insurance products in the USA, Jin (2005) found evidence that such a strategy was actively followed by firms. Given the lack of expertise from patients, health maintenance organizations (HMOs) are accredited by a National Committee of Quality

1 When customers are uninformed about the quality of the goods they buy, it is de facto in a situation of asymmetry of information and the products considered are 'experience goods' (their quality becomes known to the customers only after they purchase and experience the goods).

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Assurance (NCQA). Jin found that in the more competitive markets, HMOs were actually less likely to disclose through the NCQA.

These issues are well known from the research in industrial organization. Nonetheless, the regulation of information disclosure and consumer protection has operated under the premise that information is cheap to process for consumers. Under this 'cheap information' assumption, consumers are considered informed if they are given relevant information by the companies. In markets with complex products and non-expert consumers, this assumption has become a justification for a fiction where firms provide a large amount of information that is difficult for consumers to process and ask them to confirm that they agree with the content provided when signing on the dotted line to acquire the product/service.

Looking at the privacy policies of the 75 most popular websites in the USA in 2005, McDonald and Cranor (2008) found that their lengths vary from 144 words to as high as 7669 words – about 15 pages of text. With 2514 words, the privacy policy took a median of 10 minutes to read. Considering that people use Internet websites quickly and often for a short amount of time, this is a sizeable amount of time to read, let alone understand, a privacy policy before using the Internet website's services. McDonald and Cranor estimated the median number of unique websites visited annually by US Internet users is 1462. They estimated that it would take 244 hours or 30 working days to read all of the corresponding privacy policies before deciding to use each website.

Gibson (2013) looked at a different type of product: computers. He sampled four major providers (Acer, Dell, HP and Toshiba), representing two-thirds of the US market at the time. He found that for each purchase of a computer with a Windows-based system installed, he entered into 25 binding contracts totalling approximately 75,000 words on average. That is the length of the first *Harry Potter* book, or an estimated 7 hours of reading.

As bad as it is, the problem is much worse than just a matter of sheer length. Terms and conditions contain complex information to take in. Indeed, the information provided is most often not given in the interest of informing the customer, but rather with the aim of protecting the rights of the company and catering for future contingencies in terms of customer dissatisfaction. As a consequence, the information given is typically presented in a legalistic formal language that is hard to understand for lay customers. Even when the information given is about the product costing and characteristics, the confusopoly logic means that companies may often not even have an interest in the information provided being easily accessible by lay customers.

A study from the British Better Regulation Executive and National Consumer Council (2007) investigated this question with focus groups. They

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found that consumers were confused by the formal/legal language of terms and conditions. Many felt the information was either irrelevant or actually designed to benefit the seller rather than the buyer. For many customers, these impressions gave reasons to ignore the terms and conditions.

Existing disclosure with real humans

The present situation would be suitable for humans with no costs of processing large amounts of technical and legal information before making mundane consumption choices. Unfortunately, humans are not made that way, and an adequate regulation about information disclosure should be informed by human psychology.

It is well known that consumers make mistakes, and that sometimes they tend to make systematic mistakes due to psychological biases. Bar-Gill (2007), for instance, discussed how credit card companies can use such mistakes to increase their revenue by carefully designing their cost structures in a way that leads consumers to underestimate future costs. Such mistakes have indeed often been presented as a justification to improve information disclosure to customers as a way to protect them from being abused by corporate practices (Epstein, 2006).

The main problem with information disclosure is perhaps not *behavioural biases*, but *behavioural limitations*. These limitations should not so much be seen as a default on the customer side, but rather as inherent to the intrinsic complexity of the world customers have to navigate through to make decisions. Even mundane decisions often present an incredible degree of complexity that is too easily overlooked.

The brain is a biological device designed to make decisions. We use it to make benign decisions such as raising one's arm to drink a cup of coffee and for more complex decisions such as choosing the right pension scheme for ourselves. To make these decisions, the brain processes an incredible amount of information. It looks for the different options available, assesses their cost and benefits and chooses one of them. To understand how complex it is to make decisions and how our brains handle this challenge, let us do a detour into the psychology of decision-making.

One of the main challenges for our brain is that while it aims to make the best decisions given the available information, the sheer quantity of information available in typical decision situations is too large to be extensively processed. It is a simple truth, of which we are simply oblivious. We are so used to our mundane decisions that their actual complexity has become imperceptible. Consider one of the most common and trivial situations: having to walk a few metres from one point to another (say, from the kitchen to the

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bedroom). This action requires you to process rich visual information about the surrounding topography, the location of objects to be avoided and where to place each foot and at which speed. Your brain then has to relate this information on external stimuli to information on internal states and the location and movement of your legs and arms. It then has to decide how to best modify muscle activity in your whole body for you to achieve your goal not only without falling, but ideally with a respectable gait. This task is so commonplace that it may be hard to think of a more trivial one. However, its complexity becomes obvious when you picture the difficulties people new to this task have to go through in order to learn how to walk. Any parent can visualize the level of concentration their toddlers had to expend in order to walk without falling or bumping into things, let alone having an elegant gait.

The primary type of information required to make simple movements is visual information. Simply processing this visual information is very demanding cognitively. Indeed, the processing of visual information uses one of the largest parts of the brain (Van Essen & Drury, 1997). This importance and complexity of processing basic visual information is rediscovered by engineers aiming to design robots that are able to act autonomously in their environment. Take, for instance, the programming of robots engaged in a very difficult challenge: trying to win a football competition. Robots have to coordinate themselves, find the ball, avoid opponents and score in the opposition's goal. However, most of the computational resources are not engaged in finding strategies to beat the opposition or in coordinating with other robot players. Instead, they are engaged in the processing of visual images, which is the most demanding in terms of processing time. Programmers therefore have to rely on heuristic-like simplifications to reduce processing time and maintain it within practically feasible limits (Ashar *et al.*, 2014).

Unfortunately, while these visual data are already incredibly demanding to process, it is nowhere near enough to make decisions. Just consider the problems a standard shopper has to solve in a mundane trip to the supermarket. To decide where to go in the supermarket, the human brain has to form a goal about what is needed to satisfy overarching goals (e.g., dinner). It has to decide what path is the best to get there, and it must interpret the intentions of other humans moving around from observing them in order to avoid bumping into them. It then has to look at similar goods and assess which one is the most likely to fit the intended use for a low price.

Given the amount of information to process, a key ingredient to decision-making is the optimal allocation of cognitive resources to solve the problem at hand. This is achieved by heavily selecting the most relevant information out of the stream of stimuli received by the brain. Said differently, we can make our daily decisions because our brains ignore most of the information

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coming to us in order to focus very precisely on the short slice of reality that is important to the task we are engaged in (Gladwell, 2005). A very good example is how a discussion in a noisy pub works: it is made possible because out of all of the possible parallel discussions nearby and of the multiple surrounding noises, the brain filters out all but the voices of the relevant persons talking.

To ignore irrelevant information, the brain operates with an 'internal model' of the world that consists in a structured set of assumptions about the surrounding environment (Eagleman, 2011; Hohwy, 2013). This internal model is informed by all of our past experiences with a given environment. It allows the individual to make quick decisions in this given environment because it assumes that its most important characteristics are already known. Stimuli compatible with this model can be broadly ignored, and only unusual stimuli challenging our expectations will raise attention. This allocation of cognitive resources will consist in focusing our limited cognitive processing ability to what is important in order to make decisions while ignoring what is unimportant/expected. Going back to the pub example: we can behave as if all of the surrounding noise fades into the background as long as the pattern of this noise does not contradict our expectations about a pub environment. As soon as some unexpected noise occurs (e.g., a breaking glass, raised voices), our attention is drawn to what is happening and we have to process this new information in order to assess what to do.

This process of decision-making makes the best of limited cognitive resources. It comes with costs in that sometimes we happen to fail to notice relevant stimuli that are not perceived as relevant enough to challenge our expectations and draw our attention. The expression 'inattentional blindness' refers to failing to perceive stimuli happening in plain sight. The gorilla experiment is the most famous example of such blindness (Chabris & Simons, 2010). The experiment consists in getting people to watch a video with two groups of people (one wearing white clothes, the other wearing black clothes) throwing a basketball to each other within their group. Participants are asked to keep track of the number of passes the white team makes as the players move around each other and pass the ball to other teammates. While participants keep track of the passes the white team makes, they most often fail to notice a person in a gorilla suit walking in plain sight into the game and beating its chest in front of the camera. Psychologists have typically seen such inattentional blindness as a bias, but it is more likely a type of rational inattention for optimal decision-making. Such a strategy implies that, sometimes, some relevant information fails to be noticed in the process.

What does this understanding of how the human brain handles complexity imply for the question of information disclosure? When reading a complex

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legal document disclosing information on a product or service, the customer is not in a common situation with usual information to process and an internal model ready to ignore what is irrelevant and focus on what is relevant. Without being able to rely on such a model to ignore most of the information presented, the brain is typically overwhelmed by the complexity of the information provided, which makes it hard to know what piece of information should be attended to. A well-suited analogy is how a tourist behaves and feels when visiting a foreign and unknown city with very different architecture and social norms. While locals may rush to their usual occupations oblivious to their (usual) surroundings, the tourist notices everything, but is also less certain about what to do and how to proceed in the city.

There is therefore a very significant difference between an expert who can make sense of the terms and conditions and a lay customer. The expert knows what can be safely overlooked to focus on what is really important. As a consequence, the expert is able to scrutinize the document by asking relevant questions and looking for the specific answers to these questions. This ability to narrow down what is important allows the expert to make a judgement on the relevant aspects of the document. A lay reader most often does not know what question to ask and/or where to look for an answer.

The premise that more information is always good is therefore misguided. More information can be confusing and weaken the consumer's ability to get at the elements of information relevant for his/her decisions. As pointed out by Ben-Shahar and Schneider (2014), this practice of regulating transactions with long information disclosures that nobody reads is not just harmless; it can harm the consumer's decisions, and it can also help firms to craft contracts to their advantage in a way that harms consumer welfare. Indeed, as argued by Persson (2018), an "information provider may deliberately induce information overload to conceal information." Bar-Gill (2007) stressed the obvious asymmetry in transactions underpinned by long boilerplate contracts: "sophisticated sellers with superior information engage in form contracting with imperfectly informed and imperfectly rational consumers."

In the end, terms and conditions and boilerplate contracts protect the firm rather than inform the customers. There is therefore no proper market pressure to discipline their content. "[H]ow can consumers realistically comparison shop if they cannot discover the terms of the deal until they buy each product, take it home, and (in the case of a computer) start it up? … If they don't read it, they aren't comparison shopping. If they aren't shopping or negotiating, the longstanding market-based rationale for enforcement disappears" (Gibson, 2018).

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What should be done?

A first and natural implication of the behavioural evidence on how humans treat information is that less information can lead to more understanding. Hence, a substantial improvement would be to shorten and simplify information given to the customers. Sunstein (2011) argues for the following: "A good rule of thumb is that disclosure should be concrete, straightforward, simple, meaningful, timely, and salient." Information provided to consumers should be concrete, straightforward and simple because consumers are not legal experts and the cost of understanding information should be minimal. It should be meaningful and relate to the concerns of the consumer, not the concerns of the company. It should be timely and salient because a consumer's attention is limited and the information should be provided at the right time with the right emphasis in order to be noticed and registered.

The recommendation for simple and smarter disclosure is certainly important and valuable. However, it faces at least two challenges.

First, simplicity is not always easy to reach. One difficulty is that "simplifying fails because the complex isn't simple and can't easily be made so" (Ben Shahar & Schneider, 2014). When products are complex, such as technological and financial products or online services dealing with the consumer's private data, it may be hard to provide all of the information in simple terms without losing content and clarity.

Second, any regulation has to adequately understand the incentives of the actors being regulated. In this case, it is important to understand the incentives of firms who design an information disclosure document. It would be naïve to expect firms to simply adopt the goals of the regulator in terms of simplicity, clarity and salience in order to make the disclosure documents better for the consumers. In the end, firms aim to maximize their profit, and they will work within the formal constraints of the regulation to find the best way of doing so. Hence, it may not only be hard to find the right way to simplify a document in the first place, but there is no guarantee that firms will actually try to do it. Rather, it is likely that, in many instances, firms will pay lip-service to the regulation while still designing these documents in ways that protect them rather than inform consumers. A quest for simplicity is likely to lead to more and more intrusive regulations in these typical cat-and-mouse games played by regulators and firms: new regulations lead to unexpected and not-so-desirable behaviours, which lead to new regulations, and so on.

These challenges do not mean that simplicity should not be a goal. Indeed, in some specific cases like nutritional labelling, in a market where goods are common and usually experienced, improving and simplifying disclosure may have a positive effect. For instance, the labelling of calories has led to a decrease

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of 6% in the consumption of calories (Bollinger *et al.*, 2011). However, we should have doubts about the idea that better disclosure is the only or primary solution to the present situation.

Instead, the recognition of the expertise and informational asymmetry between companies invites a more radical revision of how transactions between consumers and companies whereby the balance of responsibility shifts from the consumer (who currently has to make informed decisions) to the firm (who should have a duty of care).

Such an approach has received growing interest. In the Netherlands, "the financial regulator came to the conclusion that because of the limited time and motivation consumers allocate to financial decisions, disclosure requirements alone are not effective enough in informing and improving consumers' decision making. These insights resulted in a desired shift of responsibility between firms and consumers. Firms need to have a more active and responsible approach in order to safeguard the interests of consumers" (Lefevre, 2017).

Let us consider two ways in which the balance of responsibility can shift.

First, the responsibility for not making mistakes could shift from the consumer to the firm, which should aim to help the consumer to avoid these mistakes. In the present situation, once informed about the product characteristics, the consumers are responsible for their choices. Take a consumer who takes a 1-year gym membership and realizes at the end of the year that he/she did not use this membership much and would have been better paying for each visit separately. This error, which comes from a well-known myopia, is currently fully the responsibility of the consumer. However, given the well-established literature on such a bias and the fact that gym contracts are purposely designed to gain from these biases, it would make sense for the customer to be informed about his/her likely mistake. Bar-Gill (2007) makes an interesting distinction between information about product attributes and information about how the product will be used. While the mandated disclosure is typically about the former, a shift of responsibility towards the firm would justify more of the latter type of information in order to help customers understand and anticipate their likely usage in the future and how it may differ from their present expectations. "For example, [credit card] issuers can disclose the amount that an average consumer pays in late fees and, more importantly, how much the individual consumer has paid in late fees over the last year" (Bar-Gill, 2007).

Second, there is a more radical way in which the responsibility can be shifted from the consumer and the firm. Given that consumers do not read terms and conditions, their decision to enter a transaction is based on their expectation of being fairly treated by a firm given the standards in the industry and the rule of law in the country. One way forward is therefore to replace the content of

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boilerplate contracts by a norm of duty of care from the company towards its customer. While terms and conditions and boilerplate agreements have become commonplace in many transactions, it should not mask the fact that a large proportion of transactions do not rely on such agreements. Consider consumers buying bread in a bakery, cheese in a supermarket or a haircut in a hair salon. They do not sign agreements stating their understanding of all of the possible risks involved and all of their possible recourses in case something goes wrong. Instead, "the law provides default rules to fill in that blank" (Gibson, 2018). Moreover, the consumers engage confidently in these transactions because they have expectations about the type of service they will get, which are in line with the duties of the sellers. In a supermarket, consumers do not need to be told about all of the possible infections that could affect the food items they buy. Nevertheless, they expect for the food they buy not to make them ill. If some food makes them sick, they would expect commensurate compensation. In any case, the law would protect them if some severe food poisoning occurs.

In his defence of boilerplate-free transactions, Gibson (2018) stresses that "one practical effect of boilerplate's departure is that default rules will play a bigger role in resolving disputes between sellers and consumers." Among these default rules is often enshrined the fact that companies have a responsibility to provide goods and services in a way that reflects a respect for the interests of the customer. The European Union consumer protection regulations, for instance, encodes such fairness rules: they preclude practices that are not in good faith or that contravene due diligence (de Streel, 2017). Another example is the 2008 Consumer Protection from Unfair Trading Regulations in Britain. They forbid commercial practices that would impair the ability of an *average consumer* to make an informed decision. The reference to an average consumer points to what can be expected by consumers in terms of information provision for them to be able to make informed decisions (see Fletcher, in this issue).

When entering into a contract, or when reading terms and conditions, customers should be made aware of the salient features of the transaction, in particular those that may conflict with their expectations. The very long documents that enumerate all of the non-salient aspects of the transaction – but that are almost never read – should be replaced by a greater reliance on default laws over which customers can have common-sense expectations.

Conclusion

The current regulation and practice of information disclosure are justified by a fictional depiction of the world. In this fiction, customers read long and

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complex documents to make rational and informed decisions over the different options they face. The fictional nature of this description is well known, and scholars discussing information disclosure regulation and boilerplate contracts have been aware of it for a long time (Gibson, 2018). In the past, the defence of this situation partly relied on the idea that, at least in theory, consumers could read the documents and make sense of them. An alternative defence claimed that even if most consumers do not read these documents, a few savvy customers do so. By the pressure they would exert on companies, they would force them not to use the fine print in a way that takes advantage of their customers.

The advent of behavioural economics makes this view untenable. The fictional nature of the present situation is now close to being common knowledge, which makes it unlikely to persist for much longer. Companies, regulators and judges are now well aware of the cognitive limitations of consumers. The disappearance of the *Homo economicus* in economics calls for a redefinition of what reasonable expectations we can have of a consumer or, more formally, the expectations we should have of a *reasonable person* in law.

Enforcing fine print and placing all of the responsibility of their (mis)understanding on the shoulders of the consumers is bound to be increasingly perceived as unfair. Changing information disclosure regulation based on our improved knowledge of how consumers actually behave is the elephant in the room. We can expect at least two broad evolutions to take place to address this issue: first, a simplification of the information presented in a salient and timely manner; and second, a shift in the balance of responsibility towards companies having to respect a duty of care to their customers. Companies, lawyers and legislators should prepare for such changes.

References

Ashar, J., J. Ashmore, B. Hall, S. Harris, B. Hengst, R. Liu, Z. Mei, M. Pagnucco, R. Roy, C. Sammut and O. Sushkov (2014), 'RoboCup SPL 2014 champion team paper', *Robot Soccer World Cup*. Springer, Cham. **8992**(1): 70–81.

Bakos, Y., F. Marotta-Wurgler and D.R. Trossen (2014), 'Does anyone read the fine print? Consumer attention to standard-form contracts', *Journal of Legal Studies*, **43**(1): 1–35.

Bar-Gill, O. (2007), 'The behavioral economics of consumer contracts', *Minnesota Law Review*, **92**(3): 749–802.

Ben-Shahar, O. and C.E. Schneider (2014), *More than you wanted to know: The Failure of Mandated Disclosure*, Princeton: Princeton University Press.

Better Regulation Executive and National Consumer Council. (2007), 'Warning: Too Much Information Can Harm, an interim report by the Better Regulation Executive and National Consumer Council on Maximising the Positive Impact of Regulated Information for Consumers and Markets', *Better Regulation Executive*.

Bollinger, B., P. Leslie and A. Sorensen (2011), 'Calorie posting in chain restaurants', *The National Bureau of Economic Research*, **3**(1): 91–128.

https://doi.org/10.1017/bpp.2019.23 Published online by Cambridge University Press

Carlton, D. and J. Perloff (2005), *Modern Industrial Organization. Addison Wesley Longman*, 3rd edn, New York.
Cate, F.H. (2006), 'The failure of fair information practice principles', *Consumer Protection in the Age of the Information Economy*, Aldershot: Ashgate.
Chabris, C. and D. Simons (2010), *The invisible gorilla: And other ways our intuitions deceive us*, New York: Crown.
de Streel, A. (2017), 'A European Agenda for Smart Consumer Protection Rules for Digital Services', *Intereconomics*, **52**(4): 226–229.
Diamond, P. (1971), 'A Model of Price Adjustment', *Journal of Economic Theory*, **3**, 156–168.
Eagleman, D. (2011), *Incognito: The Secret Lives of the Brain*. London: Penguin.
Epstein, R.A. (2006), 'Behavioral Economics: Human Errors and Market Corrections', *73 University of Chicago Law Review*, **111**.
Gibson, J. (2013), 'Click to Agree', *Richmond Law Magazine*. Winter, 16.
Gibson, J. (2018), 'Boilerplate 's False Dichotomy', *The Georgetown Law Journal*, **106**, 249–291.
Gladwell, M. (2005), *Blink: The Power of Thinking without Thinking*. London: Penguin.
Grossman, S. (1981), 'The Informational Role of Warranties and Private Disclosure about Product Markets', *Journal of Law and Economics*, **24**(3): 461–83.
Hohwy, J. (2013), *The Predictive Mind*. Oxford: Oxford University Press.
Jin, G. (2005), 'Competition and Disclosure Incentives: An Empirical Study of HMOs', *RAND Journal of Economics*. **36**(1): 93–112.
Kalaycı, K. (2016), 'Confusopoly: Competition and Obfuscation in markets', *Experimental Economics*. **19**(2): 299–316.
Lee, P. (2017), 'Global Mobile Consumer Survey', Deloitte, US edition.
Lefevre, A.F. and M. Chapman (2017), 'Behavioural economics and financial consumer protection', *OECD Working Papers on Finance, Insurance and Private Pensions*. 42.
McDonald, A.M. and L.F. Cranor (2008), 'The cost of reading privacy policies', *ISJLP*, **4**(3): 543.
Milgrom, P. (1981), 'Good News and Bad News: Representation Theorems and Applications', *Bell Journal of Economics*. **12**(2): 380–391.
Obar, J.A. and A. Oeldorf-Hirsch (2018), 'The biggest lie on the internet: Ignoring the privacy policies and terms of service policies of social networking services', *Information, Communication & Society*, 1–20.
Persson, P. (2018), 'Attention manipulation and information overload', *Behavioural Public Policy*, **2**(1): 78–106.
Simon, H.A., (1971), 'Designing Organizationsfor an Information-Rich World', in M. Greenberger (Ed.), *Computers, Communications, and the Public Interest*. Baltimore, MD: Johns Hopkins Press.
Sunstein, C.R. (2011), 'Empirically informed regulation', *University of Chicago Law Review*, **78**: 1349–1429.
Van Essen, D.C. and H.A. Drury (1997), 'Structural and functional analyses of human cerebral cortex using a surface-based atlas', *Journal of Neuroscience*, **17**(18): 7079–7102.

https://doi.org/10.1017/bpp.2019.23 Published online by Cambridge University Press