

# INTERNATIONAL JOURNAL ON CONSUMER LAW AND PRACTICE

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—*James P. Nehf*

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Protecting the Digital Consumers: Challenges and Possible Solution  
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# THE FAILURE OF ‘NOTICE AND CONSENT’ AS EFFECTIVE CONSUMER POLICY

—James P. Nehf\*

**Abstract** *One of the central models for consumer protection in most countries emphasizes a notice and consent (or choice) approach--so long as the merchant gives the consumer notice of standard contract terms, and the consumer manifests assent to those terms, the terms are deemed to be binding. In this essay, it is argued that consumer advocates and policy makers should recognize that a notice and consent approach to standard contract terms is not likely to protect consumer interests in modern day contractual settings. Technological advances allow countless standard terms to be imposed on consumers in even the simplest transactions, and manifestations of assent are questionable in many cases. The essay explains why consumers quite rationally may manifest assent to terms and conditions that are not in their interests.*

## I. INTRODUCTION

Over the past several decades, the preferred model for consumer protection in most countries has emphasized a notice and consent (or choice) approach with less emphasis on normative laws that prohibit or mandate certain contract terms, acts or practices. In this essay, I argue that it is time for consumer advocates and policy makers to recognize that a notice and

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consent approach to standard contract terms and conditions is not likely to protect consumer interests in modern day contractual settings. Indeed, policymakers are doing more harm than good by continuing to focus on notice and consent, thereby giving a misleading impression that consumer interests are being protected when they are not. Moreover, by adhering to a notice and consent regime, they avoid discussing the more difficult yet most fundamental questions about what commercial practices should be permitted and which should be banned.

The European General Data Protection Regulation (GDPR), which is one of the strongest consumer privacy laws in the world, emphasizes notice and consent as one of its central features.<sup>1</sup> The situation is worse in the United States, as illustrated by the current effort to draft a Restatement of the law of consumer contracts. Recently a team of contract and consumer law experts at the American Law Institute (ALI) released a draft ‘Restatement of the Law, Consumer Contracts’.<sup>2</sup> This new Restatement, focusing solely on consumer contracts, is an attempt to supplement the more general Restatement (Second) of Contract principles, recognizing that consumer contracts present unique challenges and situations that justify special treatment.<sup>3</sup> The draft recognizes that traditional approaches to contract formation generally favour businesses because they have found little difficulty getting consumers to ‘agree’ to contract terms without knowing the details or import of what they were agreeing to.

Technological developments online have facilitated this practice, as ‘clickwrap’ agreements proliferate and consumers find themselves frequently clicking the ‘I agree’ button realizing that they are agreeing to something but not taking the time (or having the ability) to understand the terms to which they are agreeing. Just using a cell phone app can bind a consumer to countless new terms and conditions.<sup>4</sup> Thus, the drafters observed that

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<sup>1</sup> See Regulation (EU) 2016/679 General Data Protection Regulation, Arts. 6 and 7.

<sup>2</sup> See Restatement of the Law, Consumer Contracts (Tentative Draft, 18 April 2019).

<sup>3</sup> The draft Restatement of consumer contracts has not been approved in its entirety by the ALI yet, a process that can take several years if it happens at all. Even if approved by that body of legal experts, the Restatement has no force of law in the United States until a court or legislature adopts its language. But like the Restatement (Second) of Contracts (and Restatements of the law in numerous other fields), an ALI-approved Restatement addressing consumer contracts could prove influential in the development of consumer contract law across the United States. Courts often use Restatement provisions when deciding cases, and when they do so the Restatement provisions become part of the common law of the United States.

<sup>4</sup> The author recently received an e-mail from the Uber ride sharing service stating: “Our updated Terms are effective [on X date] so please make sure to read them fully. If you use

contract formation process is hardly a process of 'mutual assent'. Despite acknowledging this state of reality, however, the draft Restatement provides that standard contract terms become part of a consumer contract so long as the consumer has been given 'reasonable notice of the standard contract terms' and a 'meaningful opportunity to review them'.<sup>5</sup> The draft also permits businesses to provide standard contract terms after the consumer has first agreed to the transaction if the consumer has a reasonable opportunity to terminate the contractual relationship after the standard terms are made available for review. Modifications of standard contract terms are covered by these same rules (reasonable opportunity for review and right to terminate).

The draft Restatement as well as the GDPR thus accept the view that, except for the most oppressive contract provisions,<sup>6</sup> notice and consent should be the governing approach to determining which terms are binding in a consumer-business relationship. The idea is that consumers should be able to make informed and meaningful choices about contract terms and conditions. The accepted norm is that if consumers are presented with contract terms that are comprehensible, and they are given an opportunity to make informed choices, those terms should be binding on them. The guiding principle is that there is an effective market for contract terms—consumers can make informed decisions about the terms that bind them—a market that can be enhanced by effective disclosure and opportunities for people to make decisions.

This ongoing effort to improve the notice and consent model is not surprising. Notice and consent regimes have been recognized as the central part

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our app or other services on or after that date, you're confirming you've read and agree to the updated Terms."

<sup>5</sup> See Restatement of the Law, Consumer Contracts (Tentative Draft, 18 April 2019), S. 2. The draft does not specify what constitutes "reasonable notice" and "meaningful opportunity to review", although draft Comment 9 states that the standard includes "reasonable indication that they are intended to be part of a legally binding transaction to which the consumer is manifesting assent, and a reasonable opportunity to review the terms. In some contexts, market norms, or course of dealing, may provide sufficient notice to the consumer that additional standard contract terms are intended to apply to the transaction". The draft includes several illustrations of reasonable notice.

<sup>6</sup> In common law countries, the unconscionability doctrine serves as a check on only the most abusive terms and conditions. See Restatement (Second) Contracts S. 208. See also, Uniform Commercial Code Ss. 2-302 (unconscionability in contracts for sales of goods). The situation is better in Europe, where the Unfair Contract Terms Directive (93/13/EEC) protects consumers against a list of unfair standard contract terms imposed by traders. Similar laws exist in other countries. Limits such as these, however, presume that other terms imposed by the merchant in a consumer contract are enforceable under the mutual assent doctrine until they are declared unlawful by statute or court order.

of contract formation doctrine for decades. The generally accepted norms girding this regime are openness and transparency, along with faith in the ability of people to act in their best interests. It assumes that consumers can assert their contracting preferences if they are given sufficient information. As the saying goes, failure to read is no excuse. Moreover, it is a lot easier to enact disclosure laws than laws mandating certain terms or prohibiting others. Consumer advocates feel that they have enhanced transparency with the adoption of disclosure laws and business know that disclosures, particularly inconspicuous language, rarely affect consumer behaviour.

While notice and consent may have been an acceptable approach to consumer contract formation many years ago, it is no longer viable following decades of technological advancement that has brought us to the point where, even in the simplest transactions, businesses can get us quickly to 'agree' to dozens of pages of terms and conditions that are designed to insulate the business from liability for just about any type of wrongdoing. In today's digital world notice and consent must be abandoned and supplanted by responsible contracting practices mandated by law (or soft law, e.g., mutual agreement between industry and consumer representatives). The pretense of assent in the modern era must be recognized as a fiction, and rejected. Policy makers or trade associations working with consumer groups must do the hard work and decide what terms and conditions are fair to both parties and insist that they be part of the contract.

In theory, the market-oriented consumer protection model could be made effective by enhanced notice and choice opportunities if individuals were capable of protecting their interests in the modern marketplace. Unfortunately, for many rational reasons, they are neither capable nor interested in doing so and it is time to accept that reality. The remainder of this essay explains some of the reasons why this is so.

## **II. LACK OF TRANSPARENCY MAKES DECISION-MAKING PURE GUESSWORK**

Terms and conditions in consumer contracts are becoming more complex and less transparent every day. They are getting longer and less readable because in a digital world because businesses need not present the consumer with a paper document to read prior to entering into a transaction. Imagine a merchant selling someone a \$20 set of ear phones in a store and giving the customer a 30-page contract to review and sign before the transaction can be completed. Not only would the printing cost to the merchant be

prohibitive, but the customer would likely be suspicious and wonder why the store needs such a long and detailed contract for such a simple transaction.

Yet today these transactions occur all the time on the Internet, in brick-and-mortar stores that require consumers to complete a transaction electronically (e.g., in a cell phone store such as Verizon), and even in homes where contractors (e.g., cable television installers) require customers to click 'I agree' on a tablet before proceeding with the work. Consumers 'agree' to pages of terms and conditions in even the simplest transactions today. No matter how much notice we are given, and even if the terms are written in 'plain' language, we cannot evaluate the risk of potential harms, nor can we make informed decisions, seek redress or stop harms from recurring, because we are not in a position to comprehend the benefits or the risks at the time when a decision has to be made.<sup>7</sup>

### III. VALUING THE INFORMATION IS VIRTUALLY IMPOSSIBLE

Even with more information and choices available, and even if people actually took the time to read terms and conditions before signalling their agreement, consumers have no idea what to do with all that information. Notice and choice solutions presume that we can value our interests and make decisions in some meaningful way after being presented with the terms.<sup>8</sup> But with standard terms and conditions there is a high degree of information asymmetry: businesses know how the terms and conditions will protect their interests (they drafted them), but individual consumers do not understand how it may affect them even if they take time to read them all.<sup>9</sup>

Take mandatory binding arbitration provisions, for example. These are prohibited in some parts of the world but increasingly in the United States businesses are including terms in consumer contracts that prohibit class actions, require mandatory binding arbitration of disputes (which can be costly), and require that any challenge to the validity of arbitration provisions be decided by the arbitrator, not a court. Even if a consumer were to read and understand such a provision in the terms and conditions, the provision will not likely have any effect on his or her decision because at the

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<sup>7</sup> Robert W. Hahn and Anne Layne-Farrar, "The Benefits and Costs of Online Privacy Legislation" (2002) 54(1) *Administrative Law Review* 85, 103.

<sup>8</sup> Curt J. Dommeyer and Barbara L. Gross, "What Consumers Know and What They Do: An Investigation of Consumer Knowledge, Awareness, and Use of Privacy Protection Strategies" (2003) 17(2) *Journal of Interactive Marketing* 34.

<sup>9</sup> See Hal R. Varian, *Microeconomic Analysis* (3rd edn., 1992) 440.

time of purchase product failure resulting in damage, and filing a lawsuit (much less a class action) is the farthest thing from the buyer's mind.

#### IV. ACCURATE CHOICES ARE COMPROMISED BY COMPETING COGNITIVE GOALS

When making decisions about whether to purchase goods or services, people compromise between their desire for complete accuracy in the decision (balancing all of the costs and benefits of the decision) and their desire to achieve other very rational goals.<sup>10</sup> Other than maximizing the accuracy of the decision, another important decision making goal is the minimization of cognitive effort.<sup>11</sup> When making decisions, people tend to expend only as much effort as they need to reach what they perceive is a satisfactory decision, even if it is not optimal in terms of its accuracy.<sup>12</sup>

Unless the decision is of great importance, people tend to make choices that are easier to implement, though less accurate because important factors are left out of the decision making process.<sup>13</sup> Thus, giving individuals more terms and conditions to read through is not likely to lead to more accurate decisions. Indeed, the longer and more complex the terms and conditions are, the less likely it is that consumers will read any of them. Except for the most obviously sensitive parts of the contract, and perhaps in very large consumer transactions, people are not going to spend the cognitive effort necessary to weigh all of the pros and cons. They will not perceive the stakes being high enough. This behaviour is perfectly rational, and businesses take advantage of it when they draft a long list of terms and conditions highly favourable to their interests.

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<sup>10</sup> Ellen C. Garbarino and Julie A. Edell, "Cognitive Effort, Affect, and Choice" (1997) 24(2) *Journal of Consumer Research* 147, 148. See generally, Patricia A. Norberg, Daniel R. Horne, and David A. Horne, "The Privacy Paradox: Personal Information Disclosure Intentions Versus Behaviors" (2007) 41(1) *Journal of Consumer Affairs* 100.

<sup>11</sup> James R. Bettman, Mary Frances Luce and John W. Payne, "Constructive Consumer Choice Processes" (1998) 25(3) *Journal of Consumer Affairs* 187, 192.

<sup>12</sup> Garbarino and Edell (n 11) 148.

<sup>13</sup> Garbarino and Edell (n 11) 149; Eric J. Johnson, John W. Payne, James R. Bettman, "Information Displays and Preference Reversals" (1988) 42(1) *Organizational Behavior and Human Decision Processes*; Denis A. Lussier and Richard W. Olshavsky, "Task Complexity and Contingent Processing in Brand Choice" (1979) 6(2) *Journal of Consumer Research* 154.

## V. PRACTICAL PROBLEMS MAKE STANDARD TERMS AND CONDITIONS LESS SALIENT

Even if when someone wants to evaluate contract terms and make self-interested decisions based on their content, practical problems create obstacles that impede optimal decision making. Most important are time constraints. When people feel that they should make a decision quickly, people switch from more careful decision-making strategies to simpler ones that result in a quicker decision.<sup>14</sup> When a tablet is presented to a consumer in a store or at home and she is asked to click 'I agree' before the transaction can continue, there is no time to read terms and conditions. And while there may be plenty of time to read the terms and conditions when a consumer is looking at a website at home, to do so would frustrate one of the principal benefits of going online—a fast and convenient way to learn, communicate, and purchase goods and services. Surfing the Internet would take forever if terms and conditions were evaluated at each site before making a decision of some kind.

## VI. BEHAVIOURAL HEURISTICS IMPACT CONSUMER CHOICES

Several behavioural factors make it unlikely that decisions about contract formation will be made with an accurate balancing of benefits and risks. Inferences play an important role in a person's decision whether to enter into a transaction, yet they often lead to less than optimal choices. If the information necessary to making an informed decision is difficult to obtain, people tend to infer the missing information from other facts that are more readily available. For example, people may assume that a particular attribute of a product or service is similar across brands (e.g., the contract terms and conditions of all banks are probably very similar) or, they may infer a value that corresponds to the values they assign to other attributes of the party with whom they are interacting (e.g., if my personal banker seems trustworthy and caring, the bank's terms and conditions will likely be fair as well).<sup>15</sup> Some inferences may be justified, but others will be totally inaccurate.

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<sup>14</sup> John W. Payne and James R. Bettman, "When Time is Money: Decision Behavior under Opportunity-Cost Time Pressure" (1996) 66(2) *Organizational Behaviour and Human Decision Processes* 131; Peter L. Wright, "The Harassed Decision Maker: Time Pressures, Distractions, and the Use of Evidence" 59 *Journal of Applied Psychology* (1974) 555.

<sup>15</sup> Gary T. Ford and Ruth Ann Smith, "Inferential Beliefs in Consumer Evaluations: An Assessment of Alternative Processing Strategies" (1987) 14(3) *Journal of Consumer Research* 363; Richard D. Johnson and Irwin P. Levin, "More Than Meets the Eye: The Effect of Missing Information on Purchase Evaluations" (1985) 12(2) *Journal of Consumer*



Framing effects can also adversely affect the accuracy of decisions. People tend to process information in a way that is consistent with the way it was presented to them, accepting it in its presented form without questioning the details or inquiring further.<sup>16</sup> These framing effects are well-known in the marketing industry<sup>17</sup> and they are most pronounced when the cost of accepting a particular presentation on its face is perceived to be low.<sup>18</sup> Only if the cost of acceptance is perceived to be high, or if the information is presented in a confusing way, will people discount the form of presentation and seek additional information before making a decision. This is one reason why many links to terms and conditions give little or no information about the content of those terms, nor even hint about their importance. Seldom do you see a warning above the ‘I agree’ button: ‘Beware — by agreeing to our terms and conditions you are giving up your right to sue us if we violate the law and you or your family are injured’. If the presentation form appears safe and unthreatening, individuals are less likely to dig beneath the surface and determine for themselves how the merchant’s terms and conditions operate.

Particularly important to contract formation choices, people are not good at making accurate decisions about low-probability risks. People tend either to overestimate the probability and take unnecessary precautions, or they ignore the risk and do nothing. Unless an unlikely occurrence is potentially catastrophic (the slight risk of a home burning causes us to purchase fire insurance), we are not willing to invest much time, money, or effort to reduce or evaluate a risk we think is not likely to occur.<sup>19</sup>

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Research 169; B. Wernerfelt, “Umbrella Branding as a Signal of New Product Quality: An Example of Signaling by Posting a Bond” (1988) 19(3) *The RAND Journal of Economics* 458.

<sup>16</sup> W. Kip Viscusi, “Individual Rationality, Hazard Warnings, and the Foundations of Tort Law” (1996) 48 *Rutgers Law Review* 625, 630–36; W. Kip Viscusi, Wesley A. Magat and Joel Huber, “An Investigation of the Rationality of Consumer Valuations of Multiple Health Risks” (1987) 18(4) *The RAND Journal of Economics* 465, 477–78.

<sup>17</sup> Irwin P. Levin and Gary J. Gaeth, “How Consumers are Affected by the Framing of Attribute Information Before and after Consuming a Product” (1988) 15 *Journal of Consumer Research* 374.

<sup>18</sup> Eloise Coupey, “Restructuring: Constructive Processing of Information Displays in Consumer” (1994) 21(1) *Journal of Consumer Research* 83.

<sup>19</sup> G.H. McClelland, William D. Schulze and Don L. Coursey, “Insurance for Low Probability Hazards: A Bimodal Response to Unlikely Events” (1993) 7(1) *Journal of Risk and Uncertainty* 95.

## VII. CONCLUSION

In just the last few years much has changed in the way consumers enter into contracts. Today, we access information and enter into contracts from portable laptops, hand held phones, tablets, e-readers, and other devices at all hours of the day and from land, air, and sea locations throughout the world. Whether it is interaction on social networks or researching the latest news story online, we are constantly entering into contractual relationships on the go. It is not surprising that firms have developed technologies and business plans that create an onslaught of binding terms that were unimaginable a short time ago, and quick ways for consumers to manifest their assent.

Yet despite our recognition of this fictitious form of assent, the draft Restatement of consumer contracts, the GDPR, and many other consumer protection laws today throughout the world, still depend heavily on a notice and consent regime that expects us to police our contracting preferences in situations where we are simply ill-equipped to do so. No matter how clear, conspicuous and timely standard terms and conditions are presented to us; we will seldom make decisions that accurately reflect our preferences. Insurmountable problems regarding the transparency of those terms and conditions, and the practical realities and behavioural tendencies of individuals when they are making decisions about contracting in a digital environment, all render even an enhanced notice and consent approach wholly ineffective. If policy makers are serious about consumer protection, they should move aggressively to ensure that substantive controls and mandatory terms become the norm—terms that are fair to both businesses and consumers—and abandon the outdated notion that consumer interests can be adequately protected by disclosure of contract terms and an individual's manifestation of 'assent' to those terms.

# CONSUMERS, CONSUMER ORGANIZATIONS AND ENFORCEMENT AGENCIES: A THREE-PRONGED APPROACH TO CONSUMER PROTECTION

—Gareth Downing\*

***Abstract** In recent decades considerable progress has been made in the definition and extension of rights to empower consumers and protect them from economic and physical harm. However, despite progress in developing legal frameworks, consumers continue to face barriers to effectively seek redress. This paper examines the incentives that consumers have to complain and commence legal actions and the scope for co-operative approaches to minimize consumer harm.*

## I. INTRODUCTION

The field of consumer law has been marked by its considerable progress in defining and specifying consumer rights and protections in the last forty years. However, although significant consideration has been given to how best to design legal frameworks, less consideration has been given to the incentives and capacity of consumers to enforce consumer rights. As a consequence, despite significant reform in consumer protection laws, outcomes for consumers in some markets have been less than anticipated.

The first step in achieving effective consumer protection is a legal framework that provides consumer rights and mechanisms for enforcement and

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protection of these rights by consumers or regulators. In the absence of clear legal rights and a well-defined regulatory framework, consumers have little or no substantive mechanisms for legal recourse. Similar sentiments apply with respect to complaint processes, though the formality and costliness of these processes tend to be lesser than those associated with traditional legal processes.

However, rights are not enough. The theoretical prospect of recourse is insufficient in and of itself if individuals lack the incentive to use the rights available to them or face resource constraints. Resources and incentives are important to the operation of the legal system. Although at times the application of economic concepts to the law has been fraught, in part due to strong normative biases,<sup>1</sup> there is much that economics can contribute to the development of sound enforcement practices.<sup>2</sup>

An application of basic economic concepts provides considerable insight into the behaviour of consumers. There are limitations of a pure rights-based approach to understanding consumer protection. The importance of resource constraints as a field of future research constraints cannot be understated; however, it is not the intent of this paper to address the implications of different levels of resourcing for consumers.

This paper will instead focus on the universal, though not uniform problem of incentives and will not examine issues of resourcing. This is a reflection of two factors. The first is a desire to avoid the devolution of this article into the muddy trenches of distributional politics, and the second is its indirect relevance to issue of incentives.

## II. THE RESPONSIBILITY FOR ENFORCING RIGHTS VARIES

The responsibility to enforce consumer protection laws varies considerably by jurisdiction. Some systems provide little or no role for consumers in the enforcement of their rights and others leaving enforcement to the private

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<sup>1</sup> The field of law & economics has been characterized by strong normative positions which have historically undermined many of its contributions. For a discussion of the normative creep see Richard A. Posner, "Economic Approach to Law" (1974) 53 *Texas Law Review* 757, 768; Michael J. Trebilcock, "The Prospects of 'Law and Economics': A Canadian Perspective" (1983) 33 *Journal of Legal Education* 288, 289; Anthony Ogus, "What Legal Scholars Can Learn from Law and Economics" (2004) 79 *Chicago-Kent Law Review* 383.

<sup>2</sup> Posner (n 1) p.769, argues that there is much that the application of positive economic techniques can teach us.

citizen.<sup>3</sup> Although different systems have varying strengths and weaknesses associated with the specification of legal rights, consideration of the practical ability of consumers to effectively exercise their rights is rare.

The following analysis relates to the incentives of individual consumers to complain or initiate legal proceedings. Accordingly, the analysis is directly applicable to those jurisdictions that provide for individual consumer rights via statute or via existing case law. Although not the focus of this article, there is scope for similar analyses of the conditions under which regulatory or enforcement agencies may initiate action to address breaches of consumer protection regulations.

The existence of rights although a necessary condition for ensuring the protection of consumers is not sufficient to ensure that consumers are adequately protected, and it is the extent to which these rights are enforced or respected that determines whether consumers face harm. The effectiveness of legal rights should be determined by reference to the actual effect of legal rules on behaviour and the substantive outcomes that they produce.<sup>4</sup>

### III. INCENTIVES

Taking this test as a barometer, how then do consumers interact with the comprehensive system of consumer rights that have been afforded to them? The answer is in most part *rarely* – when considered against the many opportunities that consumers have to complain or instigate legal proceedings, more often than not they choose not to.

This occurs quite often in jurisdictions with exceptionally well-developed legal frameworks that provide clear legal rights to consumers and avenues for recourse. However, once the law is settled,<sup>5</sup> and rights are adequately specified such that consumers may launch enforcement actions either via established complaint making processes or via legal action there is a tendency for consumers not to engage in litigation.

The issue of incentives is not merely a function of the resources that a consumer may have at their disposal, however even individuals with considerable economic resources fail to complain or commence litigation.

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<sup>3</sup> Michael Faure, Anthony Ogus and Niels Philipsen, “Enforcement Practices for Breaches of Consumer Protection Legislation” (2007) 20 *Loyola Consumer Law Review* 361.

<sup>4</sup> George L. Priest, “Michael Trebilcock and the Past and Future of Law and Economics” (2010) 60 *The University of Toronto Law Journal* 155, 166–167.

<sup>5</sup> Although arguably no law is truly settled and is constantly subject to legal review and reinterpretation.

The question that this immediately raises is *why* consumers interact with the legal system so infrequently – and the answer in the simplest terms is that there is a cost to doing so, one that often exceeds the benefits that might be attained. Because every individual face what economists like to describe as *opportunity cost*, making a complaint or commencing a proceeding means allocating resources whether financial or non-financial (e.g. time) to pursuing redress, an activity which diverts those resources from other potentially more productive or indeed valued activities (e.g. leisure).<sup>6</sup>

As individuals we regularly assess the relative costs and benefits of a particular course of action, and more often than not choose not to complain about minor inconveniences or annoyances. The frustration associated with the early failure of a cheap set of headphones that break earlier than expected, or a disappointing cup of coffee may not be enough to spur an individual into action.<sup>7</sup> However in aggregate the failure to complain or litigate may mean that producers of poorer quality goods and services continue to profit at the expense of consumers and their rivals who may sell better quality though more expensive products.

The existence of opportunity cost is part of the reason that consumers do not access *free* dispute resolution processes which should be better understood as *feeless* dispute resolution processes. The existence of opportunity costs, means that in actuality there can never be a form of dispute resolution that is *free*. The objective of less costly dispute resolution processes (to the extent that these are commensurate with principles of justice and fairness) however remains a desirable one.

#### IV. WHEN MIGHT A CONSUMER COMPLAIN OR COMMENCE LEGAL ACTION?

Assuming that consumers are rational, in that they will try to pick the best option available to them to achieve a desired outcome,<sup>8</sup> and that they will try to attain the highest benefit possible relative to costs,<sup>9</sup> they will reg-

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<sup>6</sup> This is the origin of the economist's phrase "that there is no such thing as a free lunch", as every lunch free or not implies forgoing an alternative lunch.

<sup>7</sup> Although alternative sanction approaches that are lower cost may be used, the work of Ellickson on social norms is interesting in this regard, see Robert C. Ellickson, "Of Coase and Cattle: Dispute Resolution among Neighbors in Shasta County" (1985) 38 Stanford Law Review 623.

<sup>8</sup> Richard A. Posner, "Rational Choice, Behavioral Economics, and the Law" (1997) 50 Stanford Law Review 1551.

<sup>9</sup> Vipin P. Veetil, "Conceptions of Rationality in Law and Economics" (2011) 31 European Journal of Law and Economics 199, 222.

ularly choose to neither complain nor commence litigation. Fundamentally this is because the cost to the individual as a private citizen in complaining or litigating often materially outweighs the expected benefits that may be attainable by a consumer in terms of compensation or alternative forms of redress.

However, where the injury or harm caused to the consumer is significant, as is often the case with product safety issues the incentives for consumers to seek redress may be substantial. It is therefore unsurprising that we regularly see cases of this nature in almost all jurisdictions where consumer law provides for redress.

Inversely, in those scenarios where the loss that a consumer faces is small, and the costs of seeking redress are high, or indeed merely outweigh the harm, the incentive to pursue redress is weak. A consumer would be irrational to seek compensation in those circumstances where the potential compensation that could be attained is likely to be less than the cost of its pursuit.

Accepting that there is inherently risk in the pursuit of any complaint or legal action, the incentives for consumers pursue redress are even weaker. When the expected benefits are adjusted by the probability of attaining them, and the certainty of facing some costs (in terms of time or direct financial costs) the rational consumer does not seek redress for small sums. The consumer becomes apathetic, though rationally so, and does not take action despite facing loss.

An important point to note here is not to assume that a loss that may be too small to litigate or complain about that it is necessary is of a small order of magnitude. Just because the loss to an individual consumer may be too *small* to spur them into action does not imply that the sum in consideration is in and of itself *small* by any objective viewpoint.

Litigation is costly, and individuals may be reluctant to initiate a legal action with uncertain prospects of success for small sums. Depending upon the opportunity cost faced by an individual in terms of time and financial resources it is conceivable that even relatively large sums – in the order of hundreds of thousands of dollars may be insufficient to spur complaints or litigation.

However, even if the costs are trivial at the level of the individual consumer, they may reflect widespread costs borne across the entire consumer

population.<sup>10</sup> As is the case in cartel behaviour and industry misconduct as outlined in the case study below, small harms can add up to quite substantive sums across consumer populations.

## V. HOW REAL IS THIS PROBLEM?

The problem of rational apathy exists beyond the theoretical models developed by law & economics scholars. It is reflected in empirical consumer research which indicates consumers are unlikely to make complaints where the benefits of doing so are expected to be low. Research undertaken on behalf of consumer organisations, have indicated that in industries such as telecommunications that consumers will seek to escalate complaints to the third-party alternative dispute resolution mechanism in around 3% of cases.<sup>11</sup>

In more targeted research concerning unexpected third-party charges faced by consumers on their mobile phone bill,<sup>12</sup> consumers were asked what their probability was of seeking redress by reference to the amount they had been charged. Unsurprisingly consumers indicated that their willingness to dispute a charge increases as a function of the value of that charge, with less than 36% of consumers very likely to dispute a charge of \$1, increasing to 52% for a \$5 charge, 71% for a \$10 charge and 88% for a \$30 charge.<sup>13</sup> Clearly the expected payoffs of complaining are important to consumers and there is accordingly a need for enforcement agencies and regulators to take this into consideration when determining enforcement priorities.

This outcome is to be expected, when government estimates that Australians value their leisure time at \$31 per hour,<sup>14</sup> and the average time spent in seeking to get a complaint resolved before it goes to external

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<sup>10</sup> Anthony Ogus, *Regulation: Legal Form and Economic Theory* (1994) 37–38.

<sup>11</sup> Colmar Brunton, *Can You Hear Me?* (ACCAN 2018) 40 <<http://accan.org.au/our-work/research/1523-can-you-hear-me-ranking-the-customer-service-of-australia-s-phone-and-internet-companies>> accessed 13 June 2019.

<sup>12</sup> Ipsos, *Mobile Third Party Billing* (ACCAN 2017) 58 <[https://accan.org.au/files/Reports/Ipsos%20Report%20-%20ACCAN%20Third%20Party%20Billing\\_FINAL%20060717%20v2.pdf](https://accan.org.au/files/Reports/Ipsos%20Report%20-%20ACCAN%20Third%20Party%20Billing_FINAL%20060717%20v2.pdf)> accessed 6 June 2019. This research had a total sample size of n = 2,018, with variation in sample size according to response.

<sup>13</sup> *Ibid.*

<sup>14</sup> Australian Government Office of Best Practice Regulation, “Regulatory Burden Measurement Framework” (Canberra 2016) 18.



dispute resolution is 3.4 hours.<sup>15</sup> A consumer would need to be facing considerably more than a loss of \$1 or even \$30 to justify expending \$105.4 of their leisure time in seeking to rectify an unexpected third party charge.

Accordingly, while a useful indication of the existence of the problem, the survey responses received from consumers concerning third-party charging probably overstates their actual likelihood of making a formal complaint. This is also reflected in the survey responses of those consumers who actually faced unexpected charges, and who had not engaged in the complaint process.

Of those consumers who indicated that they had not contacted their service provider over 48% indicated that they had not done so because they believed that the charge was too small to worry about or they didn't have the time to dedicate to it.<sup>16</sup> In economic terms, about half of consumers had determined that the costs of seeking redress were likely to outweigh the benefits of attempting the process.

This result is striking, when considered against the fact that access to the alternative dispute resolution framework is notionally free, with consumers facing no fees for using it. The argument therefore that consumers are sufficiently empowered because they have free access to alternative dispute resolution mechanism may therefore be weak if the true cost of engaging in a dispute is the indirect loss of one's productive or leisure time.

The implications of few consumers seeking to exercise their rights would be less concerning if it were not for the significant amount of harm that can occur at the market and economy level as a result of weak incentives. However, as is the case with cartels, small amounts of distributed harm can have significant market-wide or economy-wide implications.

This problem is also likely to be universal and perhaps even more extreme in those economies where the opportunity cost of an individual's time is particularly high, such as those working for subsistence. However, within and across societies the issue of opportunity cost is endemic, and it is likely that we would see the problem affecting those at either ends of the spectrum of income and wealth.

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<sup>15</sup> Australian Communications and Media Authority, "Reconnecting the Consumer — Estimation of Benefits" (2015) 15.

<sup>16</sup> *Ipsos* (n 12) 55.

The harm to a consumer in individual terms may be relatively small as was identified in the aforementioned study. However, in the aforementioned market for third party charges the harms faced by consumers across the marketplace were in fact significant.

In late 2018 and early 2019 court action by the Australian Competition and Consumer Commission resulted in the two main providers of third-party billing services admitting that the number of impacted customers were likely to number between 100,000 to 340,000.<sup>17</sup> In absolute terms, the estimated losses to consumers in this market had been in excess of \$47 million over a series of years, with consumers facing losses of \$24.24 million from Telstra Australia's largest service provider,<sup>18</sup> and \$23.4 million from Optus the second largest.<sup>19</sup> The aforementioned estimates of consumer loss are likely to be conservative, with third-party billing practices having a considerably broader reach and longer history than that identified in the context of these cases.

## VI. WHY THIS PROBLEM IS IMPORTANT

The problem of weak incentives to complain or litigate is important because it can result in outcomes like the one seen above, where consumers faced significant harm at the aggregate level but at the individual level did not seek recourse. This is problematic for numerous reasons not least of which is that it provides poor incentives for firms and suppliers of goods and services to engage in harmful conduct where the prospect of a consumer seeking redress is low.

Whether a party which has engaged in misconduct faces the prospect of penalties, complaints or potentially a legal suit from a consumer is important to setting the incentives that they face. The risk of sanction whether

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<sup>17</sup> *Australian Competition and Consumer Commission v. Optus Mobile Pty. Ltd.*, 2019 FCA 106, 58, <<http://www6.austlii.edu.au/cgi-bin/viewdoc/au/cases/cth/FCA/2019/106.html>>; *Australian Competition and Consumer Commission v. Telstra Corp. Ltd.*, 2018 FCA 571, 73, <<http://www.austlii.edu.au/cgi-bin/viewdoc/au/cases/cth/FCA/2018/571.html>>.

<sup>18</sup> *Ipsos* (n 12); *Australian Competition and Consumer Commission v. Telstra Corp. Ltd.*, 2018 FCA 571, at [52]. This figure has been estimated by applying the rate of non-consent to revenue figures using ACCAN survey results (12%), if the limited survey results set out at 37 were accurate the estimated loss would be \$155.4 million. As the sample size was exceptionally limited ACCAN considers that this upper bound figure is likely to be inaccurate but notes that consumer losses may be in excess of the baseline estimate.

<sup>19</sup> This figure has been estimated by applying the rate of non-consent to revenue figures using ACCAN survey results (12%), against Optus revenues of \$195 million, set out in detail at [57] in *Australian Competition and Consumer Commission v. Optus Mobile Pty. Ltd.*, 2019 FCA 106.

social, administrative or under consumer law is enough to deter many individuals and firms from engaging in misconduct. For those for whom the law alone does not provide sufficient dissuasion from misconduct, the reality of sanctions becomes important.

However, if consumers as the enforcers of their rights lack incentives to make a complaint or litigate, firms engaging in misconduct are able to obtain an economic gain at the consumers expense and face no prospect of sanction. A situation of rational apathy is therefore a recipe for consumer harm, in the absence of enforcement action by government agencies or regulators.

In abstract terms, this problem represents a loss to the economy through the misallocation of scarce resources, but in practical terms it can often mean that consumers, including the most vulnerable in our societies face the appropriation of their income or wealth. Setting aside the economics of the matter, this would represent a step backwards from the objectives eloquently expressed in consumer protection law, namely, to protect consumers and support ethical market transactions.

The second reason that the problem is important is because the first step to resolving any problem is acknowledging its existence. Once identified the problem of weak consumer incentives to initiate a complaint or legal action can help enforcement agencies and regulators to focus part of their enforcement efforts towards low-level but widespread problems. Enforcement agencies already take this approach, in respect to cartel conduct where the harm faced by the individual consumers through increased prices or anti-competitive conduct may be low, but the industry or economy wide harm is material.

The third reason that this problem is important is because it can spark a genuine discussion between enforcement agencies, consumer organizations and industry about whether existing approaches to consumer law are achieving their objectives. There is unlikely to be any one particular approach to promoting better outcomes for consumers, however the following section outlines some options and considerations when examining potential solutions.

## **VII. POSSIBLE SOLUTIONS TO THE PROBLEM**

The problem of weak incentives to engage in complaint processes and litigation has historically been identified as a problem in the law & economics

literature, with some authors proffering potential solutions to the issue. Possible solutions include the bundling of similar interests among affected consumers through class-action processes,<sup>20</sup> the creation of mechanisms for the referral of complaints by consumer organizations or the more classical centralized enforcement model.

The use of class action processes to resolve the problem of weak incentives to pursue complaints or commence litigation, although a sound proposal in that it reduces the costs faced by individual consumers does create other issues. In resolving the issue of incentives of consumers to pursue compensation, new issues are created with respect to the incentives of those acting on behalf of consumers to pursue early settlement. Irrespective of the limitations of the process of creating mechanisms for obtaining compensation for consumers, it is area that merits further research.

The simplest and most immediate solution to the problem is likely to be the adequate resourcing of consumer representation and advocacy bodies funded either via industry levy or via government revenues. Funding consumer organizations to receive, pool and refer complaints onto enforcement agencies is likely to represent a relatively low-cost way for regulators to identify problems like those outlined above. Strong relationship and co-operation between consumer advocates and enforcement agencies have the potential to allow for the rapid identification of pervasive, but low-level harm that is best addressed through centralized enforcement action.

The use of super-complaints mechanisms or more simply a referral mechanism has found support among economists as a potential opportunity to reduce the costs of identifying areas for potential enforcement action. In a recent review to Australia's consumer protection framework, the potential for a well-designed super-complaints or referral mechanisms to be used to identify areas of consumer harm was found to have merit.<sup>21</sup>

The role of consumer organizations is therefore important in a context where enforcement agencies have resource limitations of their own and are not in a position to act wherever a breach of consumer laws occurs. Consumer organizations can pool their significant on-the-ground knowledge

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<sup>20</sup> Hans-Bernd Schaefer, "The Bundling of Similar Interests in Litigation: The Incentives for Class Action and Legal Actions Taken by Associations" (2000) 9 *European Journal of Law and Economics* 183.

<sup>21</sup> Productivity Commission, *Consumer Law Enforcement and Administration* (2017) 224.

to assist regulators and enforcement agencies to refine their efforts to address those areas where the greatest harm is being faced by consumers.

An effective and responsive enforcement environment, with active enforcement agencies and regulators will provide strong incentives for firms to comply with consumer protection regimes. A key part of this is deterring misconduct through individual, collective and state action to demonstrate to those considering engaging in misconduct that the rewards of doing so are likely to be fleeting, followed by sanctions and erode their reputation and profitability.<sup>22</sup>

### VIII. REDRESS AFTER ENFORCEMENT ACTION CAN STILL BE COSTLY TO OBTAIN

Following a successful claim for compensation or enforcement action by a regulator, consumers can still face material costs in obtaining redress. In addition to the costs associated with making a complaint or initiating a legal claim, once an outcome is arrived at in favour of a consumer getting access to redress is not a costless activity. In 2017 and 2018 the Australian Competition and Consumer Commission obtained enforceable undertakings from an array of internet service providers that they would provide compensation to consumers that had been misled about potential speed that could be provided.<sup>23</sup>

More recent reports indicate that on the issue of third-party charges that less than 26% had taken up offers of compensation from Telstra.<sup>24</sup> A positive view of the failure of consumers to take up offers of compensation is that they had not faced material harm as a consequence of the

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<sup>22</sup> Gary Becker, "Crime and Punishment: An Economic Approach" (1968) 76 *Journal of Political Economy*.

<sup>23</sup> Australian Competition and Consumer Commission, *Telstra Offers to Compensate 42,000 Customers for Slow NBN Speeds* (2017); Australian Competition and Consumer Commission, *Dodo, iPrimus and Commander to Compensate over 5000 Customers* (2018). <<https://www.accc.gov.au/media-release/dodo-iprimus-and-commander-to-compensate-over-5000-customers>>, accessed 24 September 2018.

Australian Competition and Consumer Commission, *Measuring Broadband Australia: Initial Findings Report*, March 2018 (2018); Australian Competition and Consumer Commission, *Measuring Broadband Australia, Report 2*, July 2018 (2018);

Australian Competition and Consumer Commission, *S. 87-B Undertakings Register* <<https://www.accc.gov.au/public-registers/undertakings-registers/s87b-undertakings-register>> accessed 24 September 2018.

<sup>24</sup> Ry Crozier, "Telstra Offered 272,397 Refunds for Premium Content Charges", *itNews* (Sydney, 3 June 2019) <[https://www.itnews.com.au/news/telstra-offered-272397-refunds-for-premium-content-charges-526065?utm\\_source=twitter&utm\\_medium=social&utm\\_campaign=itnews\\_autopost](https://www.itnews.com.au/news/telstra-offered-272397-refunds-for-premium-content-charges-526065?utm_source=twitter&utm_medium=social&utm_campaign=itnews_autopost)> accessed 8 June 2018.

aforementioned conduct and therefore were not interested in the compensation on offer. The more likely explanation is the same as that outlined above – where compensation is not available automatically and a process is entailed – a consumer may find the opportunity cost of spending their time on obtaining compensation exceeds the sum on offer.

The underlying economics and logic of this problem is fundamentally the same as above, if it costs a consumer 2 hours to attain compensation of \$50, and the value of that time to the consumer is \$62, then it would be illogical to expect that they would seek redress. The dimensions of this problem are important in considering the mechanisms on offer for consumers to seek compensation, but also importantly when designing how compensation is to be paid.

Regulators, lawyers and enforcement agencies should be cognizant of this problem and seek to devise compensation mechanisms that involve automatic payment of eligible consumers or that minimize the opportunity costs of obtaining compensation to the minimum amount required. As part of developing any compensation process the evidentiary requirements associated with assessing eligibility are of course important.

In designing compensation arrangements consideration should be given to the incentives faced by consumers and the sum in question. Processes should be proportionate to the sum in question. Accordingly, in circumstances where the compensation to be paid is relatively small a process that is simplified may be preferable to a more costly or complex process, which may be appropriate in matters concerning large sums.

Although a definitive conclusion cannot be arrived at either way in respect to the compensation on offer under the terms of the undertaking described above, the cost of obtaining redress in terms of opportunity cost is an area for further research.

## **IX. THE ONE-LEGGED STOOL APPROACH TO CONSUMER PROTECTION**

It is improbable that any approach to consumer protection that relies on a sole agent as the enforcer of rights will be effective. All parties whether they be consumers, consumer organizations or enforcement agencies face constraints and reliance on any one of these three groups to be the sole enforcer of consumer protection laws is akin to attempting to construct a one-legged stool – it is bound to fail in one way or another.

Relying on consumers who face weak incentives to complain and litigate in many instances is a recipe for under-enforcement of consumer protection laws. Similarly, although consumers and consumer advocates can be fierce, effectively contribute significantly to strong outcomes in individual cases or industries; the resourcing of consumer organizations is usually insufficient to ensure consumers are adequately protected.

In other contexts, however, consumers have been left to their own devices with the expectation that they are best placed to enforce their rights. Setting aside the practical barriers that consumers face in terms of exercising their rights, including structural gaps in knowledge and resource limitations, opportunity cost, weak incentives and rational apathy are problems that are unlikely to be resolved without genuine action by consumer organizations, consumer rights lawyers and enforcement agencies.

An alternative and more constructive approach to enforcement would entail a tripartite approach to consumer law, with consumers, consumer organizations and enforcement agencies work co-operatively and independently of one another to protect the interests of consumers. In the aforementioned case study this is what occurred, with consumers coming to the peak consumer group for communications the Australian Communications Consumer Action Network who then gathered evidence and notified the Australian Competition and Consumer Commission who undertook a full investigation and commenced enforcement proceedings.

The problem of rational apathy is not one that can be resolved through the action of any one entity, whether this be consumer organizations or enforcement agencies, but rather requires a co-operative and collaborative effort by all parties to address the problem. Consumer organizations can contribute much, through their grass-roots engagement with consumers and can inform enforcement agencies and regulators about whether the law is operating effectively in practice, whether there are new problems emerging or the need for enforcement activity.

## **X. THE NEED FOR RESEARCH CONTINUES**

This article outlined some of the contributions of law & economic scholars to the theory of litigation and enforcement incentives for individuals. However, little empirical or primary research has been undertaken on these issues and the understanding of how incentives influence consumer behaviour in complaining or litigating remains limited. The mechanics of

compensation mechanisms and how best to design these mechanisms in light of the costs that they entail for consumers who have faced harm is another area that deserves further empirical research.

As a branch of research, the role of incentives in the decision's consumers make about complaining or litigating is one with significant opportunities for future research. Although in the abstract consumers may face weak incentives to complain or commence litigation, how consumers assess the opportunity cost of doing so is an important component in any real-world analysis of the problem. There are however sufficient theoretical and evidentiary grounds on the basis of the case study outlined above to conclude that there is a *prima facie* case for further investigation and research on this issue.

How the issue of incentives interplays with real world constraints faced by consumers in terms of the resources that they have available to them, has not been considered in this article. However, resources do play a significant role in the opportunity costs that consumers face. What role they play is unclear and highly contextual and consequently have been excluded from this analysis.

For example, although it may be simple to assume that consumers who are living on a subsistence wage may have weak incentives to complain about a breach of their rights, a *small* loss, in the totality of their income may represent a sufficiently large loss for them to seek redress. Alternatively, the costs associated with taking time off work may be significant and as a result the loss of work may outweigh the loss they face as a consumer.

In light of the practical limitations associated with assessing the impact of resourcing in an abstract setting, the issue of resources has been set aside. As an avenue of research however the role of resources in the incentives that consumers have in complaining, engaging in litigation and seeking compensation remains an interesting and important one.



# BLOCKCHAIN ‘WITNESS’: A NEW EVIDENCE MODEL IN CONSUMER DISPUTES

—Matej Michalko\*

**Abstract** *Concealing, falsifying, or altering court evidence is a significant issue on a global scale. An act like evidence tampering can serve as downright detrimental not only to criminal investigations and civil lawsuits but also the judicial system as a whole. In this article, Matej Michalko, CEO and Founder of one of the pioneering blockchain companies in the world, DECENT, explains how blockchain-supported evidence can be efficiently used to present legitimate proof in consumer disputes, demonstrating the benefits of using the secure, modern, and innovative technology inside the juridical sphere through authentic examples in which blockchain has served as a legitimate means for presenting evidence. As a leading figure in the blockchain scene, Michalko delves into various subject matters such as third-party evidence preservation platforms, judicial blockchain consortium, applying blockchain to trace online sales and protecting consumer rights, surging e-commerce consumer disputes and “off-radar” counterfeits, offering a global perspective on blockchain-based evidence preservation and its relevant developments in the judicial domain as well as exploring the technical*

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*principles, demand, context, judicial environment, and social significance of the application of blockchain technology in consumer protection.*

## I. INTRODUCTION

On June 28, 2018, the Hangzhou Internet Court (HIC), China's first Internet court, recognized the validity of blockchain timestamped proof in a copyright dispute, the first time a court admits the legal value of blockchain-based evidence preservation through lawsuit results. In the dispute, the copyright holder, City Express, exclusively authorized Huatai Yimei, as the plaintiff, to file a copyright infringement suit on its behalf. The defendant, Datong Technology Co., Ltd. was found to reprint City Express' articles and photos without permission, allegedly infringing on the plaintiff's right of dissemination through information networks. The defendant was then sued in the HIC, and demanded compensation for the plaintiff's financial loss.

Unlike ordinary copyright infringement cases, the plaintiff, in order to prove its claim, preserved evidence with blockchain technology: the plaintiff used a third-party blockchain evidence preservation platform to automatically fetch the web pages accused of copyright infringement, and identified their source codes. The web pages and source codes, together with the packages of call logs, were calculated to get a hash value to upload to the blockchain network to ensure the integrity of the evidence.

Taking the blockchain-supported data storage and legal standards for reviewing electronic evidence into full account, the court examined the effectiveness of blockchain-based evidence preservation. The court admitted the authenticity of the electronic data as the web page screenshots and source codes were fetched and identified with a credible platform; the above-mentioned electronic data was preserved using blockchain technology that meets relevant requirements, thus ensuring the data integrity; as the hash value was verified and consistent with other evidence, the court decided to base its judgment on the electronic data. In this connection, the HIC found that the electronic evidence of the blockchain submitted by the plaintiff had legal effect. In the end, Datong Technology was convicted of

copyright infringement and ordered to compensate the plaintiff for financial loss in the amount of RMB 4,000 yuan.<sup>1</sup>

The innovative practice of utilizing blockchain technology to store electronic data and ensure data integrity is a new way to integrate the Internet and electronic evidence preservation, which provides more possibilities for right holders to defend their rights and reflects a new trend of electronic evidence.

Globally, China has taken the lead in recognizing the legal effect of blockchain evidence, and thus blockchain evidence has been rapidly applied in various scenarios. Meanwhile, as China's growing share of online consumption brings about an increasing number of infringement disputes, consumer rights protection has already become a social focus. This paper will, by taking the development of blockchain evidence preservation in China as an example, explore the technical principles, demand, context, judicial environment, and social significance of the application of blockchain technology in consumer protection.

## II. WHAT MAKES A BLOCKCHAIN 'WITNESS' CREDIBLE?

In this case, blockchain evidence preservation plays the role of a key 'witness'. So, what is the principle behind?

### A. Blockchain Network: Tamper-free and Traceable Data

Blockchain is a form of distributed ledger technology that is maintained by multiple nodes on a blockchain network.

Distributed networks are completely different from traditional centralized networks. Distributed network theory proposes to establish an interface between each computer or network, and the connection does not require central control, but is directly connected through the interface between the networks. For distributed networks, the importance of a single node is greatly reduced. When one approach is not feasible, it is completely possible

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<sup>1</sup> "Ten Typical Cases of the Hangzhou Internet Court" (Zhejiang Law Online, 3 September 2018) <<http://www.zjzfz.com.cn/index.php/cms/item-view-id-70473.shtml>> accessed 11 July 2019.

to take another one. And if a node has an error, it is not repaired through the central command, but by the node itself.

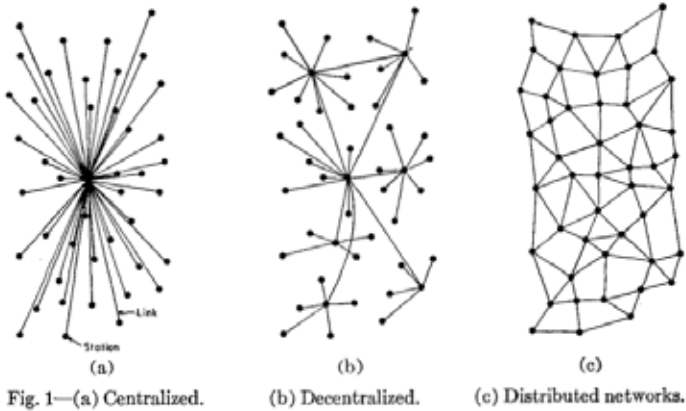


Figure: Centralized, Decentralized and Distributed Systems (Paul Baran, 1964)<sup>2</sup>

Additionally, in theory, the data transmitted in a distributed network has a specified length, and data exceeding this length is divided into a few blocks and transmitted again. Each block contains not only data itself, but also information about where it comes from and where it goes. These blocks are transferred between stations, with each station maintaining a record until it reaches its destination. If a block is not successfully delivered, it will be resent by the initial computer. If the delivery is successful, the computer that receives the data block will recombine all the blocks received, and then give a 'Data Received' message after confirming the data. In this way, the computer that originally sent the data will not send the data again.

In 1961, Dr L Kleinrock from the Massachusetts Institute of Technology (MIT) published the paper 'Information Flow in Large Communication Nets', the first time that the theory of distributed networks was discussed in detail. In the 1960s, Paul Baran, a Polish-American engineer, wrote several reports, which not only systematically expound the theory of distributed networks but also the core of network communication: packet switching. In 1965, with the support from the RAND Corporation, Baran officially proposed to the U.S. Air Force to establish a distributed network. At the same

<sup>2</sup> Paul Baran, "On Distributed Communications Networks" (RAND Corporation Papers, 1962) 2626 <<https://www.rand.org/content/dam/rand/pubs/papers/2005/P2626.pdf>> accessed 15 July 2019.

time, D.W. Davis, a British physicist, also proposed the theory of distributed network in a way much the same as Baran's, except for the naming. Baran referred to the split, easy-to-transfer data as blocks. After careful consideration and consulting with linguists, Davis decided to use the term 'packet' for the data, and 'packet switching' for the way how data is split.

Thanks to specifications and protocols adopted by consensus, and open and transparent algorithms, blockchains in modern networks translate trust in humans into trust in algorithms, eliminating human intervention in the system.

The network security of the blockchain and the tamper-resistance nature of blockchain data are determined by the following two factors. First, the nature of its distributed network: once the information is verified and added to the blockchain, it is permanently stored and difficult to tamper with (unless a 51% attack occurs and more than 51% of the nodes in the distributed network are attacked and stored records are tampered with, but in the real world this hardly happens<sup>3</sup>).

Second, hash value verification is the basis of cryptography and blockchain technology. Through the operation on the encryption function (hash function), the electronic data will obtain a unique tamper-free ID to ensure its integrity.<sup>4</sup> If the input changes, the output will be completely different. However, if the input does not change, the resulting hash output will always stay the same, no matter how many times you run the hash function. In blockchain network, the hash output serves as the unique identifier of the data block. The hash value of each block is generated based on that of its previous block (which explains why the blocks are linked together to form a blockchain), and also on the data contained in the block, which means any changes made to the data will influence the block hash value.<sup>5</sup>

The hash values ensure the security and tamper-resistance of blockchain data, providing a prerequisite for the validity of blockchain evidence to be accepted in lawsuit cases.

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<sup>3</sup> Jake Frankenfield, "51% Attack" (Investopedia, 24 May 2018) <<https://www.investopedia.com/terms/1/51-attack.asp>> accessed 15 July 2019.

<sup>4</sup> Jake Frankenfield, "Hash" (Investopedia, 20 October 2017) <<https://www.investopedia.com/terms/h/hash.asp>> accessed 15 July 2019.

<sup>5</sup> The Economist Staff, "Blockchains: The Great Chain of Being Sure About Things" (*The Economist*, 31 October 2015) accessed 15 July 2019.

As information technology has been continuously integrated with society and businesses, there is an increasing volume of legal issues and disputes in the fields of e-commerce, internet finance and intellectual property. Generally, the traditional evidence requires notarization with long response time and high preservation cost, and the application scenario cannot meet the dynamic, real-time and big data requirements of electronic evidence preservation. The blockchain evidence preservation service features a simple process, low cost and high data reliability. The right holder can use the platform for real-time evidence preservation when the infringement occurs.

“Blockchain is a decentralized database that is open, distributed and irreversible, and works as an electronic data storage platform with low cost, high efficiency and stability. In judicial practices, the legal effectiveness of electronic evidence storage should be comprehensively determined based on the principle of technology neutrality, technical description and case review,” said the trial judge from the HIC.<sup>6</sup>

## **B. Legal Ground for the Validity of Blockchain Evidence Preservation: judicial Interpretations of China’s Supreme People’s Court (SPC)**

On September 3, 2018, the SPC of China provided legal confirmation for trusted timestamps and blockchain-based evidence preservation in the form of judicial interpretations.

The SPC’s ‘Provisions on Several Issues Concerning the Trial of Cases by Internet Courts’ (hereinafter referred to as the ‘Regulations’) sets forth a comprehensive series of rules for trial principles, scope of acceptable cases, trial jurisdiction, evidence exchange, and electronic data in internet judicial procedures. In addition, the Regulations facilitate the electronic institutional innovation of trial mode, electronic delivery, electronic case files, and appeal procedure.

For the first time, the SPC gave detailed judicial interpretations for the trial of cases by Internet courts. As referred to in Article 11 of the Regulations, ‘Where the authenticity of the electronic data submitted by a party can be proven through electronic signature, trusted timestamp, hash value check, blockchain or any other evidence collection, fixation or

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<sup>6</sup> “Hangzhou Internet Court—The First to Accept Blockchain Proof as Means of Evidence”, (*Legal Daily*, 29 June 2018) <[http://www.legaldaily.com.cn/index/content/2018-06/29/content\\_7581930.htm?node=20908](http://www.legaldaily.com.cn/index/content/2018-06/29/content_7581930.htm?node=20908)> accessed 11 July 2019.

tamper-proofing technological means, or through the certification on an electronic evidence collection and preservation platform, the Internet court shall make a confirmation?<sup>7</sup>

### **C. Infrastructure: Third-party Evidence Preservation Platforms and Judicial Blockchain Consortium**

In the previous trials of dispute cases, evidence preservation usually requires the involvement of a third-party authority such as a notary office, and relevant persons are required to fix the evidence under the witness of the notary. With the more frequent use of electronic evidence, most of the third-party electronic data preservation platforms have investigated the pattern of “blockchain + evidence collection and preservation”, which is applying blockchain technology to the traditional electronic evidence preservation practice (i.e., uploading the preserved evidence to a blockchain platform). If necessary, you can apply online for an expert opinion from the judicial expertise centre.

In practice, the court will also review the qualifications of the evidence preservation platform. In the opening case, as the shareholder and business scope of the operating company affiliated to the third-party evidence preservation platform is independent of that of the plaintiff Huatai Yimei, and the platform also passes the integrity check conducted by the National Quality Supervision and Testing Center for Information Network Products (NTI), the HIC therefore recognized the platform’s qualification as a third-party electronic evidence preservation platform.

Third-party evidence preservation platforms and the judiciary are working together to establish a pilot judicial blockchain consortium that centers on both internet courts and traditional courts.

In September 2018, the HIC, one year after its establishment, applied blockchain in its online lawsuit handling system, where appellants can submit contracts, rights protection procedures, service process details and other electronic evidence through online portals under the witness and verification of the nodes including the notary offices, judicial expertise centers, CA/RA (certification/ registration authorities), courts, Ant Financial Services Group (Alipay’s credit and finance service system). As of 1 May 2019, the HIC’s

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<sup>7</sup> “Provisions of the Supreme People’s Court on Several Issues Concerning the Trial of Cases by Internet Courts” (China’s Supreme People’s Court, Interpretation No. 16 [2018], 3 September 2018).

judicial blockchain platform now has access to a notary office, a judicial expertise center, and 32 third-party blockchain evidence platforms.<sup>8</sup>

Since the launch of HIC's blockchain-based system, most of the cases have been successfully closed through mediation. As of late April 2019, the rate of copyright disputes withdrawn through mediation increased from 82.3% to 95.3%.<sup>9</sup>

As for the Beijing Internet Court (BIC), its electronic evidence platform—Scale Chain, or 'Tianping Chain' in Chinese, jointly established with the leading blockchain enterprises in China, was launched in December 2018. Within the first three months following its establishment, 17 judicial blockchain nodes were built, application data of 24 Internet platforms/third-party data platforms was successfully integrated with the data of blockchain evidence platforms.<sup>10</sup> As of March 22, 2019, the Scale Chain had collected more than 3.3 million data entries on the Internet. In addition, as the ecosystem involves multiple blockchain evidence platforms, there in fact may be tens of millions of corresponding entries.<sup>11</sup>

### III. APPLYING BLOCKCHAIN TO TRACE ONLINE SALES AND PROTECT CONSUMER RIGHTS

In 2018, China's online retail sales amounted to RMB 9006.5 billion yuan, an increase of 23.9% over the previous year. The online retail sales of physical goods reached RMB 7019.8 billion yuan, an increase of 25.4% and accounting for 18.4% of the total retail sales of consumer goods,<sup>12</sup> resulting in a surge of consumer complaints against online retailers.

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<sup>8</sup> "Hangzhou: Over 90% of Copyright Disputes Withdrawn Thanks to Blockchain" (Xinhuanet, 1 May 2018) <[http://www.xinhuanet.com/legal/2019-05/01/c\\_1210124225.htm](http://www.xinhuanet.com/legal/2019-05/01/c_1210124225.htm)> accessed 11 July 2019.

<sup>9</sup> (n 8).

<sup>10</sup> "3 Months after Release, the Beijing Internet Court's 'Tianping Chain' Has Collected Over 1 Million Data Entries", (*Beijing News*, 23 December 2018) <<https://baijiahao.baidu.com/s?id=1620609464467575438&wfr=spider&for=pc>> accessed 11 July 2019.

<sup>11</sup> "Data Volume of the Beijing Internet Court's 'Tianping Chain' May Have Reached Tens of Millions" (*People's Daily Online*, 29 March 2019) <<http://blockchain.people.com.cn/n1/2019/0329/c417685-31002730.html>> accessed 13 July 2019.

<sup>12</sup> "Total Retail Sales of Consumer Goods Increase by 9.0% from January to December 2018" (National Bureau of Statistics of China, 21 January 2019) <[http://www.stats.gov.cn/tjsj/zxfb/201901/t20190121\\_1645784.html](http://www.stats.gov.cn/tjsj/zxfb/201901/t20190121_1645784.html)> accessed 17 July 2019.



### **A. Surging E-commerce Consumer Disputes and “Off-Radar” Counterfeits**

As shown by the consumer complaints against hundreds of online retailers handled by the third-party e-commerce consumer dispute mediation platform ([www.315.100ec.cn](http://www.315.100ec.cn), formerly known as “China E-Commerce Complaints and Consumer Protection Platform”), the complaints received in the year 2018 have witnessed a year-on-year increase of 38.36%, second only to the 48.02% in 2017. Among them, the domestic online shopping complaints represent the highest percentage, accounting for 55.19% of all complaints; cross-border online shopping complaints accounted for 6.82%.<sup>13</sup>

Among all the online orders, luxury goods have become the hardest-hit area for torts and disputes. The feedback received from Chinese consumers who bought luxury goods from online retailers in 2018 shows a dissatisfaction rate of 42%. As some 73% of the luxury goods online retailers in China purchase from unofficial channels, and the shipment rates of unofficial channels have reached 81%, customers are 48% or more likely to be cheated by fake luxury goods.<sup>14</sup> The huge profit margin of brand counterfeiting and proficiency at fake goods fabrication have contributed to the surge of fake fabrication. Moreover, the counterfeit goods team can even manage to get the fake-proof code numbers, so that even if the customer checks, he or she is highly unlikely to tell whether it is fake or not.

### **B. Difficulties in Producing Evidences make it Hard for Online Consumers to Defend their Rights**

According to Article 64 of China’s Civil Procedure Law: ‘It is the duty of a party to an action to provide evidence in support of his allegations’.<sup>15</sup> First, the consumer has to provide the purchase record to prove that he or she has a buyer-seller relationship with the online retailer. Then, he or she needs to provide prima facie evidence to prove that the retailer sells fake products. There are three valid bases: (1) The seller acknowledges sales of

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<sup>13</sup> 2018 China E-Commerce User Experience and Complaint Monitoring Report, (E-Commerce Research Center, 12 March 2019) <<http://www.100ec.cn/zt/2018yhts/>> accessed 17 July 2019.

<sup>14</sup> China Digital Luxury Report 2019 (Yaok Institute, June 2019) <<https://finance.sina.com.cn/chanjing/gsnews/2019-06-17/doc-ihvhiqay5899941.shtml>> accessed 11 July 2019.

<sup>15</sup> Standing Committee of the National People’s Congress, “Civil Procedure Law of the People’s Republic of China” (approved on 9 April 1991, revised on 28 October 2007 and 31 August 2012) <[http://www.npc.gov.cn/wxzl/gongbao/2012-11/12/content\\_1745518.htm](http://www.npc.gov.cn/wxzl/gongbao/2012-11/12/content_1745518.htm)> accessed 17 July 2019.

counterfeits; (2) The brand provides appraisal reports; (3) The state authorities of industry and commerce provide expert evidence.

Generally, the most effective way to produce evidence is to get appraisal reports from the brand. However, in practice, very few brands are willing to provide consumers with authenticity identification services. Also, most third-party appraisal agencies only accept the judicial expertise entrustment, and in most cases do not provide consumers with authenticity identification services. In judicial practice, if the right holder (the brand suspected of being infringed) cannot be found, the judicial authority will entrust a third-party agency to authenticate. The report issued by the agency is not an authenticity appraisal report, but an 'inconsistencies comparison' report, stating that the entrusted product is inconsistent with the original sample.<sup>16</sup>

Among the reported online shopping infringement disputes, there is a typical scenario where the buyer finds inconsistencies between the product bought online and the counter product, and then the seller is required to provide the source information and certificate of the product, which the seller is not able to provide; then the buyer therefore contacts the e-commerce customer service centre to make a complaint, only to get refused by the e-commerce platform on the grounds that 'the chat history that indicates the seller cannot provide the authenticity identification' and 'the comparison photos of the purchased product and the counter product' are not convincing enough; while waiting for the result of the complaint, the buyer will find the product link already invalid: 'the product you are viewing does not exist or may have been sold out or transferred'.<sup>17</sup>

### C. Blockchain-supported Product Traceability and Consumer Protection

On 1 January 2019, the 'E-Commerce Law of the People's Republic of China' officially came into force, complementing China's Cybersecurity Law and Consumer Rights Protection Law. This has strengthened the responsibilities and obligations of e-commerce operators, especially third-party platforms, contributing to better consumer protection.

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<sup>16</sup> "Joint and Several Liability Mechanism Forces the E-Commerce Platform to Crack Down on Counterfeits" (*Yanzhao Evening News*, 1 November 2017) <<http://zj.sina.com.cn/news/zhuazhan/2017-11-01/detail-ifynmnae0893834.shtml>> accessed 17 July 2019.

<sup>17</sup> "How Can We Protect Online Shopping Against Counterfeits? Legal Opinion: E-Commerce Platform Should Compensate First" (*People's Daily Online*, 24 January 2018) <[http://www.xinhuanet.com/yuqing/2018-01/24/c\\_129797536.htm](http://www.xinhuanet.com/yuqing/2018-01/24/c_129797536.htm)> accessed 17 July 2019.

Article 38 of the E-commerce Law clearly states that ‘Where an operator of an e-commerce platform fails to take necessary measures when it knows or should know of the fact that operators on its platform sell commodities or offer services that fail to safeguard personal or property safety, or commit any other acts that impair the lawful rights and interests of consumers, the operator of such e-commerce platform shall be jointly held liable together with the violating operators on its platform’.<sup>18</sup>

Professor Qi Aimin, dean of the National Cybersecurity Protection and Rule of Law Strategy of Big Data Institute of Chongqing University, referring to the first case where blockchain proof was accepted as means of evidence, points out that the new Internet technology represented by the blockchain may bring about new trends in tracing the source of e-commerce products, evidence collection and preservation.

Traditional fake-proof tools (barcode, QR code, etc.) use centralized approaches: product information is controlled by manufacturers and is easy-to-replicate, which does not guarantee the rights of consumers. Look at how blockchain is used for product-tracing and anti-counterfeiting: the product is marked by the Internet of Things (IoT, such as the Smartdust<sup>19</sup>) and AI recognition to form identity information with unique physical characteristics of the product, which is later stored in the blockchain network; in every link from manufacturing to distribution, the product (together with the “marks”) is compared with the physical characteristics and identity information stored in blockchain through AI recognition, crawler technology, and hash verification<sup>20</sup>, to guarantee the authenticity of the product. The information generated in each link will be stored in blockchain; the information is encrypted, verified, and packaged into blocks through the blockchain distributed network to constitute a tamper-free, interlocked and bidirectionally-traceable record chain; at last, consumers can track through online queries.

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<sup>18</sup> Standing Committee of the National People’s Congress, “E-commerce Law of the People’s Republic of China” (approved on 18 December 2018) <<https://baike.baidu.com/item/%E4%B8%AD%E5%8D%8E%E4%BA%BA%E6%B0%91%E5%85%B1%E5%92%8C%E5%9B%BD%E7%94%B5%E5%AD%90%E5%95%86%E5%8A%A1%E6%B3%95/16467544?-fromtitle=%E7%94%B5%E5%95%86%E6%B3%95&fromid=22679227&fr=aladdin>> accessed 17 July 2019.

<sup>19</sup> Charles Brett, “DECENT’s 3IPK: Blockchain For Aviation Supply Chain, And More” (*Enterprise Times*, 13 September 2018) <<https://www.enterprisetimes.co.uk/2018/09/13/decents-3ipk-blockchain-for-aviation-supply-chain-and-more/>> accessed 17 July 2019.

<sup>20</sup> “Whitepaper on Tracing with Blockchain (Version 1.0)” (Trusted Blockchain Initiatives, October 2018) <<http://www.caict.ac.cn/kxyj/qwfb/bps/201810/P020181023464389645849.pdf>> accessed 17 July 2019.

Product-tracking in this way will minimize human intervention, as it relies on the neutrality and reliability of technologies to build trust between the brand, e-commerce platform and consumer to eliminate counterfeiting, and at the same time provide sellers and buyers with credible evidence when product authenticity is questioned or damage during shipping arises.

In addition, consumers can turn to third-party blockchain evidence preservation platforms to store the product information, promotional information, return/change commitments provided by online retailers in web pages, apps, advertisements and chat boxes. Consumers can preserve evidence for potential disputes without worrying that the sellers might refuse to admit or delete relevant information.

The E-Commerce Law also puts higher demands on the protection and fair use of big data. Based on the underlying technologies of blockchain, big data technologies that can guarantee privacy protection, security and high efficiency will soon be recognized and widely used in the market.

#### **IV. A GLOBAL PERSPECTIVE OF THE BLOCKCHAIN-BASED EVIDENCE PRESERVATION AND RELEVANT DEVELOPMENTS IN THE JUDICIAL DOMAIN**

In May 2018, Ohio Senator Matt Dolan submitted to the state legislature a bill intended to clarify the legal status of blockchain signatures and contracts. The bill, SB300, failed to advance but portions of its language were inserted as amendments into another bill, SB220. The full language that survived intact focuses on blockchain contracts and signatures: (1) "A record or contract that is secured through blockchain technology is considered to be in an electronic form and to be an electronic record." (2) "A signature that is secured through blockchain technology is considered to be in an electronic form and to be an electronic signature." Later in August 2018, Ohio passed the bill and signed it, which means that Ohio has legally recognized the validity of blockchain data.

In July 2018, the Dubai International Financial Centre (DIFC) Courts announced that it is partnering with the Smart Dubai initiative to set up what it calls the world's first "court of the blockchain". Based on the current dispute resolution mechanism, the two sides will first explore how to help the Courts verify the judgment on cross-border law enforcement. The research will combine expertise and resources to investigate disputes arising from private and public chains, as well as coding rules and contractual

terms of smart contracts. According to this blockchain strategy, Dubai will be able to run 100% of applicable government transactions on blockchain by 2020.

In August 2018, the UK government announced an initiative to explore the use of blockchain technology to secure electronic evidence. The pilot project aims to assess whether the distributed ledger technology (DLT) can be utilized to simplify and streamline the present-day court processes, according to Balaji Anbil, the head of the Digital Architecture and Cyber Security team at HM Courts & Tribunals Service (HMCTS), Ministry of Justice.

In November 2018, Azerbaijan announced the country would start using blockchain in notaries, courts, penitentiaries, NGOs and registries. The Azerbaijani Internet Forum is preparing for the adoption of blockchain by the government, starting with the Ministry of Justice. The agency currently provides over 30 electronic services, and also about 15 information systems and registries. The “electronic notaries”, “electronic courts”, penitentiary services, information systems of NGOs, and population registration are all included. The planned project entitled as “Mobile Notary Office”, can assemble all notarial documents in one case. The DLT is expected to enhance the transparency of the country’s legacy systems that are vulnerable to the falsification of the population registration and database.

# THE THEORY OF PREVENTIVE CONSUMER LAW IN DIGITAL ADVERTISING

—Camilo Alfonso Escobar Mora\*

## I. CREATION OF BUSINESS DIGITAL ADVERTISING IN THE THEORY

In the theory of preventive consumer law in digital advertising creation of advertising must be done in a way that provides and makes the valid case (the valid case of business digital advertising) on what depends on creation. This means that conception, conceptualization, design and, in general, the variables (direct and indirect) of its creation must be harmonious with rules that apply to advertising according to its nature, content and effects.

Then: company must be diligent in defining the way it will be created and in making the creation valid. As diligence (commercial diligence — business diligence—) is the way to make the valid case: both that form and the creation must be valid. That is, both the creation process and the final product that is created must be harmonious with rules that apply to its variables. Then: creation process must be harmonious with rules that apply to the variables (extracontractual and/or contractual) of this process and the product created (the advertising created) must be harmonious with rules that apply to the variables (non-contractual and/or contractual) of said product.

Everything depends on the variables that the case has. The rules that apply depend on the case. The harmony necessary to make the valid case

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is defined and tailored to the case. The important thing is that it is a harmony that makes effective (all) the rules coming in the case. Then: that harmony must be in a way that makes applicable rules in the case materialized in their facts (in the facts of the case). Properly: that materializes the rules in each fact in which they apply and that the case (understood as the set of their facts) materialize harmoniously and comprehensively. That is the valid case in theory.

In theory: a case (case —the case—) is a legal relationship. Then: a case can involve several cases. Therefore: the case of business digital advertising is the case of the legal relationship (consumer relationship) formed between the company (business) and the consumer based on advertising (business digital advertising). But: that case involves (depending on the case) several cases. The case of creation of business digital advertising, the case of operation of business digital advertising, the case of communication of business digital advertising and the case of attention (attention of the effects) of business digital advertising.

Therefore: company must be diligent in detecting the rules that apply to each case of creation of advertising both in its creation process and in the attention to the nature, object and scope of the product that is created. In fact: in creation of advertising there is the case of the creation process and the case of the product created. The case of the creation process means the set of variables (extracontractual and/or contractual) involved in the way advertising is created. The case of the created product means the set of variables (extracontractual and/or contractual) involved in the advertising created and, in the relationships, (extracontractual and/or contractual) that company forms with consumer based on this.

Hence the importance of creating advertising. It is only possible that the case of creation of advertising is valid if the case of the process of creating the advertising and the case of the advertising created are valid. Therefore: the valid case of business digital advertising is only possible if the case of creation of advertising, the case of operation of advertising, the case of communication of advertising and the case of advertising attention are valid.

Properly: the valid case of business digital advertising is only possible if the company is diligent in making its variables involved harmonize with the rules that apply to it in a way that makes those rules materialized in its facts (in the facts of the case).

## II. COMMUNICATION OF BUSINESS DIGITAL ADVERTISING IN THE THEORY

In the theory of preventive consumer law in digital advertising communication of advertising is the way in which the message is transmitted and must be valid. It is valid if each of its variables (in each of its facts and in all its facts as a whole), each of its facts and all its facts as a whole (properly: the case understood as the set of its facts) are harmonious with rules that apply.

This is concrete in that business digital advertising must be communicated in a way in which the message that is transmitted is harmonious with the rules that apply to its nature, content and scope (effect) and make (achieve) a language agreement with the consumer that is harmonious with rules that apply to both that communication and the case of advertising.

Then: there is the case of communication of business digital advertising and there is the case of business digital advertising. The case of communication of advertising means the case of the legal relationship that is formed between the company (commercial) and the consumer based on the form of communication of advertising. The case of business digital advertising means the case of the legal relationship (extra contractual and/or contractual) that is formed between the company and the consumer based on a digital business advertisement.

Therefore: the case of communication of advertising has its variables and facts. That is to say: it is a case that is made up of facts and each fact is composed of variables. Properly: the case is the set of its facts (and each fact is the set of its variables —properly: a fact is a set of variables related to a particular element within the case—). Then: its validity is when each of its variables, each of its facts and its facts as a whole are harmonious with the rules that apply to them.

But: it is a case that at the same time is part of the case of business digital advertising. The case of business digital advertising includes both that case and the case of creation of advertising, the case of operation (functioning) of advertising and the case of attention (attention of the effects) of advertising. Therefore: for the case of communication of business digital advertising to be valid, the case of business digital advertising must be taken into account.



Because: the case of communication of advertising is only valid if advertising is communicated in a harmonious way with the rules that apply to the form of communication and that is only possible if the case of business digital advertising is known and it is foreseen and makes the communication harmonious with the rules that apply to that case. Then: it must be foreseen and have the advertising communicated in a way that makes the duties and rights applicable to that communication (and in the case of advertising in relation to the form of communication of advertising) are efficient.

For that reason: to make the communication of the advertising valid (properly: to make the valid case of communication of the digital business advertising) it must be taken into account that advertising is a form of communication. Properly: it is a form of communication to influence consumer decisions. So: advertising can communicate messages that are not information, communicate messages that are information or communicate both messages that are not information and messages that are information. The information is the true, objective and verifiable message.

Then: the company must communicate the message (or messages) that is (are) harmonious with the rules that apply to the form of communication and the case of advertising. Everything depends on the case.

In some cases: it can communicate (in whole or in part, that is: in relation to one, several or all the messages that are communicated) any kind of message (or messages) and communicate it (or communicate them) in the way it decides (whenever it is diligent—that is, that it be in a way that makes the valid case—). In other cases: the company must communicate (in whole or in part, that is: in relation to one, several or all messages that are communicated) a specific message class (or messages), but it can communicate it (or communicate them) in the way it decides (as long as it is diligent). And in other cases: it must communicate (in whole or in part, that is: in relation to one, several or all the messages that are communicated) a specific class of message (or messages) and must communicate it (or communicate them) in the manner indicated in the rule or the rules that apply to the case of communication of advertising and/or the case of advertising (company only have the freedom to decide and do what is not indicated in a precise, clear and comprehensive way, as long as decides and make it in a diligent form—diligently—).

For this reason: company must be diligent in anticipating (foreseeing) and making advertising communicate (properly: that the message or the

messages of the advertisement are communicated) —whether it is communicated directly, whether it binds (links) a third party to communicate it or whether that it is a mixed model in which the company communicates a part and one or some third parties communicate another part— in a harmonic way with the rules that apply to the nature, content and scope (effect) of the message (or messages).

For example: that does not transmit to the consumer a content that for her/him is sensitive and injures one or more of her/his rights. Or for example: that fulfils the information duty or duties (properly: the duty or duties related to the information) that company has in that advertising in a way that makes effective the information right or rights (properly: the right or rights related to the information) that consumer has in that advertising.

At the same time: the company must be diligent in anticipating (foreseeing) and making advertising communicate in a way that makes a language agreement harmonic with the rules that apply to both the case of communication of advertising and the case of business digital advertising. This means that advertising must make a language agreement with the consumer in which consumer perceives, receives and/or understands —according to the case— the message (or messages) of the advertising in a harmonic way with the rules that apply to both the case of communication of advertising and the case of business digital advertising.

That is to say: company must be diligent in communicating the advertising (and/or in making that the third parties that are linked in the advertising communication be diligent in communicating the advertising) in a way that makes the perception, reception and/or understanding (as the case may be) of the advertising make effective the rights and duties of the company and the consumer that are applicable both in the case of communication of advertising and in the case of digital business advertising.

So: the case of communication of advertising is valid if advertising is transmitted with a message (or messages) whose nature, content and scope is harmonious with rules that apply and achieves a language agreement with consumer that is harmonious with the rules that apply.

### **III. OPERATION (FUNCTIONING) OF BUSINESS DIGITAL ADVERTISING IN THE THEORY**

In the theory of preventive consumer law in digital advertising functioning of advertising must be done in a way in which its variables

(extracontractual and/or contractual) are harmonious with rules that apply to them.

That is to say: there is the case of operation (functioning) of digital advertising (business digital advertising). That case involves facts. Each fact involves one or several variables (depending on the case). Then: the case is valid if each variable of each fact is harmonic with the rules that apply to it, if each fact is harmonious with the rules that apply to it and if all the facts (properly: the case —understood as the set of its facts—) are harmonic with the rules that apply to them.

To make this valid, the case variables must be detected and dealt with in a way that makes them harmonious with rules that apply to them. Therefore: company must be diligent in making that harmony is done both in its acts and elements and in the acts and elements of the third parties involved in the case of operation (functioning) of digital advertising. Properly: the company must be diligent in making the valid case of operation (functioning) of business digital advertising (that is to say: in making the case of valid functioning of the business digital advertising).

So: the operation (functioning) case of business digital advertising is not synonymous with the consumer relationship (that is: the relationship between the company —commercial company— and the consumer). It is not to make the valid consumer relationship that is formed based on a digital advertisement. It is to make the way of functioning of advertising is valid. This includes that consumer relationship is valid in terms of the operation (functioning) of advertising. But: consumer relationship formed based on digital advertising is only valid if both the creation, operation (functioning), communication, attention (attention of the effects) and/or any other variable involved in advertising is valid.

For that reason: the case of operation (functioning) of advertising focuses on the facts and variables of how advertising works. For example: in the way the collection and the use of the consumer personal data works in the model (system —in general: case—) of advertising involved. So: this is the case of the way advertising works. For that reason: if the valid case of functioning of business digital advertising is made, functioning of advertising is harmonized with the rules that apply to it.

Now: the case of the consumer relationship formed based on business digital advertising includes both this case and other cases. Mainly: the case of creation of advertising; the case of operation (functioning) of advertising;

the case of communication of advertising; and the case of advertising attention.

For that reason: so that the case of business digital advertising in the consumer relationship (that is: the case of the consumer relationship formed based on business digital advertising) is valid, all the cases that it involves (according to the case) must be valid. This makes that each fact, each variable and all the case facts of the consumer relationship formed based on the business digital advertising are harmonious with the rules that apply.

#### **IV. ATTENTION OF DIGITAL BUSINESS ADVERTISING IN THE THEORY**

In the theory of preventive consumer law in digital advertising the attention of advertising means that the company (commercial company) assumes the effect it causes. That is to say: that company assumes the effect caused by advertising. The effect may be extra contractual and/or contractual.

The extra-contractual effect of advertising is the legal relationship that is formed with a consumer based on advertising and that does not form a contract. For example: to communicate to the consumer a content (message) that is sensitive to her/him (that is to say: that violates one or more of her/his rights, as the case may be).

The contractual effect of advertising is the legal relationship that is formed with a consumer based on advertising and that forms a contract. For example: to communicate to the consumer a content (message) that is a commercial offer (that is to say: a message that is an invitation to celebrate a mercantile business —commercial business—) and that she/he accepts it (what forms a contract).

Now: the extracontractual effect of advertising may exist along with the contractual effect of advertising if the case does both effects. That is to say: it is possible that both effects coexist. Everything depends on the case. For example: advertising can communicate to the consumer a content (message) that stimulates their emotions in a valid way, but at the same time can communicate another content (another message) that is a commercial offer and that she/he accepts it.

Then: there is the case of digital advertising attention. This is the case of the legal relationship (extracontractual and/or contractual) that is formed based on the effect of advertising and consists in that effect is validly

addressed. For that reason: it is a case that has facts. Each fact is a part of the case. Properly: each part of the case is formed with the fact involved and their respective variables. Because: each fact has variables. And: the case is the union of their facts.

That is to say: it is a case that means the set of its facts. The set of its facts does not mean the result of adding them. It means the case understood as the set of its facts. That is to say: it is the result of involving all the facts of the case and presenting them as a whole (that is to say: as a whole created by the union of its parts).

Therefore: in order for the digital advertising attention case to be valid, each fact must be valid, each variable of each fact must be valid and all the facts (therefore: all the variables) as a whole must be valid. That is to say: the case is valid if the advertisement effect is valid and the form of effect attention is valid.

Then: the company must be diligent in anticipating (foreseeing) and making each fact, each variable and the case (as such) valid. In the theory: validity means the harmony of the being (for example: of the case, of the fact and/or of the variable) with the duty to be legal —legal must be. Legal must have— (that is: law) that applies to it (specifically: with the legal —juridical— norms —that is to say: rules that contains rules and/or principles— that govern the being) in a way that makes the being materialize that should be.

That is to say: the case of advertising attention is valid if each message that is communicated has a valid effect and the effect of each message is validly served (attended) by the company. So: for the case of advertising attention to be valid both the creation and operation (the operating —functioning— model) and the communication of advertising must be valid. For that reason: in order for the advertising attention case to be valid, the business digital advertising case must be valid.

Properly: the case of digital advertising attention is part of the case of business digital advertising. That is to say: the case of attention of advertising (advertising attention case) is a delimited legal relationship, but at the same time it is part of a case (of the case of digital business advertising) that involves both that case and the case of creation of advertising, the case of operation (functioning) of advertising and the case of communication of advertising.

Therefore: company must be diligent in anticipating (foreseeing) and making both that case and the other cases involved in the case of business digital advertising (business digital advertising case) are valid. This makes the case of business digital advertising valid (that is to say: business digital advertising valid case).

## V. CONSUMER PERSONAL DATA PROCESSING (TREATMENT) IN THE THEORY

In the theory of preventive consumer law in digital advertising the processing (treatment) of consumer personal data means the legal act that a person makes (physical —natural— or moral —juridical—) that has as an object the reception and/or use of that data for a specific purpose —that is: for an specific activity and/or objective— (if the purpose is indeterminate, the legal act is vitiated because its object is imprecise). Personal data is the data that is linked and/or associated to a person.

Data owner (properly: data holder) is the person who links and/or associates with the data. Is the person linked and/or associated with the data. Then: consumer is the owner (holder) of the data with which her/him is associated and/or linked. That is to say: she/he is the owner (holder) of the data that is associated and/or linked to her/him. Properly: the consumer is the owner (holder) of the data that is associated and/or linked to her/him specific and particular characteristics in a way that makes her/him determinate and/or determinable.

There is public personal data and not public personal data. The public is the one that can be received and/or validly used without having the authorization (consent) of its owner (holder). But: the reception and/or use is only valid if it is done for the purpose for which a rule considers it public. That is: it is only valid if it is done for the purpose determined in the rule. For that reason: if the norm (rule) does not determine the purpose with clarity (properly: if the norm does not determine the purpose) the data is not public. The non-public data (data of restricted reception and/or use) is the one that can only be received and/or validly used if the person that needs to use that data has the owner (holder) authorization (consent).

Now: in the theory the processing (treatment) of consumer personal data must be done when it is diligent to make the advertising that is communicated to be valid. In general: in the theory the processing (treatment) of consumer personal data is done if it is diligent to make the legal relationship

between the company and the consumer based on advertising valid. And: it should not be done if it does not make that validity. For that reason: diligence defines the necessity of processing (treatment) of consumer personal data (according to the case, in the case and to the extent of the case —tailored to the case—) and the form to make that processing (treatment) valid (when it is necessary).

Processing (treatment) of consumer personal data is a unilateral legal act that involves actions and/or omissions on these data. Therefore: as it is a legal act must meet the validity elements that apply (depending on the case). It is clarified: in the theory that act is included within the legal relationship that is formed between the company (commercial company) and the consumer based on advertising (digital advertising) because the treatment is linked to an advertising activity (advertising activity).

Properly: the processing (treatment) is linked to a company unilateral legal act whose purpose is the communication of advertising from the company to the consumer (or towards consumer) and that company act (unilateral act of communication of its advertising to the consumer or towards consumer) can be part of a legal relationship that has formed with the consumer (if before the advertising communication that relationship has been formed) or can form a legal relationship with consumer (if before the advertising communication does not a relationship has been formed).

This relationship can be extra-contractual or contractual. There is a contractual relationship if the relationship prior to the advertising communication forms a contract or if consumer accepts an advertisement that has the form of a commercial offer. There is an extra-contractual relationship if the relationship prior to the advertising communication does not form a contract or if consumer is not informed of an advertisement that has the form of a commercial offer (that is to say: if advertising does not communicate a commercial offer to the consumer).

Then: the act validity (of the unilateral legal act of processing —treatment— of consumer personal data) depends on the validity of that legal relationship (that is to say: depends on that legal relationship validity). Therefore: the legal relationship must be harmonious with the rules that apply to it. And: as the act is part of that relationship if the relationship is valid the act is valid.

Then: the consumer (or her/his valid representative) must accept (validly) the formation of that relationship. What also makes the development

and termination of that relationship valid for that acceptance (as for that acceptance). But: so that the whole relationship is valid (properly: so that the relationship is valid) both the formation and its development (execution) and termination must be harmonious with rules that apply.

And: if within that relationship there exists an act of processing (treatment) of her/his personal data that processing (treatment) must be valid both in the fact of being accepted by her/him (before it is performed) in a valid way with the rules (norms) that apply to it (that is to say: with rules that apply to that acceptance) as in the fact of be done in a harmonious way with rules that apply to it (that is to say: with rules that apply to that processing) and to be completed in a harmonious way with the rules that apply to it (that is to say: with rules that apply to that completeness).

For that reason: the company or the third parties that it involves to do that act in its representation must be diligent in making that unilateral legal act (that is to say: in processing —treatment— that data) in a valid way. As its object (that is to say: as the object of the act) is not directly available to the person who performs the act (because the consumer personal data is not its property. In general: does not have the ownership right over the consumer data personal) it (that is: the company) must obtain the right of use, enjoyment and/or disposition that is related to the purpose of the act.

As the company is the person who performs the act (including: it is the person in whose name the act is performed, in the case in which another person does it in its representation) that is the person who must obtain the right of (that is to say: the right to) use, enjoyment and/or disposition that is related to the purpose of the act. Another thing is that people linked to the company must be authorized by the company to perform the act on its behalf and must only do so on what the company obtains the right of use, enjoyment and/or disposition that is related to the object of the act.

The act object is the treatment of the consumer personal data for a specific purpose. That is: for a specific activity and/or objective. In the theory: that specific activity and/or objective is an activity and/or objective related to the digital advertising communication from the company to the consumer (or towards consumer).

Company obtains the right of use, enjoy and/or dispose of that data from a rule. From the rule (included: from the set of rules) that applies to the case (according to the case, in the case and to the extent of the case —tailored to the case—).



This rule can be a norm that makes it obtain the right to use, enjoy and/or dispose of that data in a direct way (if the act object is the treatment of a public personal data and the act is related to the specific processing —treatment— purpose that is allowed in that norm) or it can be a norm that makes it obtain the right of use, enjoyment and/or disposition of that data in an indirect way that consists of obtaining the consumer authorization (if the act object is the treatment of a non-public personal data).

Then: when the act object is the treatment of a non-public personal data the consumer must authorize that person to validly use, enjoy and/or dispose of her/his personal data. And: the act can only be done for what consumer has authorized.

Then: company must be diligent in foreseeing and making the legal relationship it forms with consumer based on an advertisement valid. Therefore: it must be diligent in defining if processing —treatment— is necessary for that validity. And: if the treatment is necessary the company must be diligent in foreseeing and making that legal act be valid.

## **VI. ARTIFICIAL INTELLIGENCE TO MAKE THE VALID CASE OF BUSINESS DIGITAL ADVERTISING**

In the theory of preventive consumer law in digital advertising artificial intelligence is a means (properly: it is a product —good and/or service, depending on the case—) that can make the valid case (the valid case of business digital advertising) if necessary to do so. This means that the company's diligence (commercial diligence —mercantile diligence—) defines when it is necessary to create and/or use artificial intelligence to make the valid case. Everything depends on the case.

For that reason: artificial intelligence is only necessary when it makes the valid case. That is to say: when the artificial intelligence makes a part, parts and/or the whole case valid it is necessary to create it and/or use it. So: it is diligent to create and/or use artificial intelligence when it makes a part of the case or the whole case valid. Properly: in the theory make the valid case means to make the facts of the case (case facts) are harmonic with the rules that apply to them in a way that those facts materialize those rules (in the case).

Therefore: if artificial intelligence contributes to that harmony and/or makes that harmony (depending on the case) it is diligent to create and/or

use it. Properly: it is a duty (duty of diligence) to use and/or create artificial intelligence when it is necessary for the valid case (to make the valid case).

In fact: making the valid case is only achieved (done) if that validity is done in an effective way (efficient and effective). There is only the valid case if that harmony is done effectively. Properly: there is only the valid case if done diligently. The diligence is a rule (norm) applicable in the case. Then: the case can only be valid if it is harmonious with the rule (or rules) of diligence that apply to it (in general: the case is only valid if it is harmonious with all the rules that apply to it).

Therefore: when artificial intelligence is necessary to make the valid case it is a must (duty) to create it and/or use it to do it. It is only possible to make the valid case if its form is effective. Properly: creating and/or using artificial intelligence is a duty (duty of diligence) to make the valid case when it is necessary to make the harmony that makes the valid case and/ or when it is necessary for that harmony to be in an effective way.

Then: the diligence (mercantile diligence —commercial diligence—) defines in each case if creation and/or use of artificial intelligence is necessary or unnecessary to make the valid case.

## VII. PREVENTIVE LAW IN DIGITAL ADVERTISING COMMUNICATED TO CONSUMERS

*Preventive law is when there is legal validity, effectiveness and security in the case. —Camilo Alfonso Escobar Mora*

This article presents the structural elements of the theory of preventive law for the effectiveness of consumer rights in relation to the advertising that the company communicates in electronic commerce (digital advertising). It should be specified that the legal (juridical) concept of consumer only exists when consumer relations are formed. These are relationships in which one end is a company (of a commercial nature) and the other (is) a consumer. The consumer (consumer) is any person, physical (natural) or moral (legal) who does not act professionally and regularly in the relevant market of the company with which she/he interacts.

The relevant market (relevant market) is the geographic and product (good and/or service) context in which the company develops its ordinary business turn —ordinary business activity— (for example: the geographical context of an electronic commerce platform can be a specific country and

the product context the good and/or service offered in that territory). It is worth clarifying that a company can have a main relevant market (for example: operate worldwide and offer licenses for the use of specific software) and several relevant submarkets, according to the different scenarios and sectors involved in each case (for example: when it operates in each country, or even in each territory within that country). This is important because the relevant market of each legal relationship allows establishing the public order that applies to it and the way to comply with it through self-regulation tailored to the variables involved.

That is what preventive law consists of. The aim is to create self-regulatory solutions that allow each legal, contractual or extra-contractual, link (relationship) to be valid. The premise that governs validity is the generation of legal effectiveness. This means that something is only valid if it enforces the applicable rules (norms) in each case. So, the validity (validity) is not only formal. It is also material. The validity is the harmony of the formal and material variables of the case. Only in this way can efficiency be obtained: the enjoyment of the rights and the fulfillment of the duties that proceed in the specific situation (specific case).

Having defined the above, this doctrine (theory) must be related to the topic of digital advertising in consumer relations. When the consumer receives or perceives this kind of messages they must be valid. Its validity depends on the advertising nature. Advertising is a form of communication (that is to say: it is the transmission of a message from a sender to a receiver) that can be merely communicative or communicative and informative. The first one refers to communicating messages that are not information. The information (information) is the true, objective and verifiable message. This advertising can be done when the company enjoys the freedom to communicate without informing, for example: to communicate an advertisement (ad) that does not present affirmations but emotional experiences in the abstract.

Otherwise, it can not be merely communicative, since it has to be subject to one or several duties of information (depending on the case). When it has such freedom, the communication must ensure that the content and/or effects of the messages do not harm any consumer right (for example: that is not a sensitive content that transgresses a legally protected right enshrined in its favor, such as an announcement with violent content that affects the special and prevalent protection of minor —under-age— consumer rights). However, and as a consequence of the freedom that exists in this kind of

advertising, it is not subject to information duties, because advertising does not contain or cause information. The determining factor for the validity of this advertising is that it achieves a valid agreement of the language with the consumer, that is to say that this subject receives, perceives and understands validly.

In the second case, advertising communicates messages that contain or generate information. Here, the company must detect what information duties apply to it and ensure that the communication is done in a manner that allows the consumer to receive sufficient, accurate and timely information, according to the type of message (involved). If this is achieved, the advertising will be valid because it fulfils the information duties and achieves the mentioned language agreement.

Giving way to a vision of empathy: advertising is for the consumer. Only in this way will a valid language agreement be formed. Then, the preventive law is obtained when the company acts with diligence (mercantile diligence—commercial diligence—) to determine if its advertising can be communicative or communicative and informative, and if the form that is going to do is the one that is more effective (that is to say: efficient and effective) to achieve language agreement, and if it is validly done. Thus, being (advertising) coincides with the duty to be legal that applies, according to the case variables (formal and material)—that is to say: advertising matches with law. Creating (including: communicating) a valid advertising—. If this is done in this matter, and in any other topic, the quality of life increases. Preventive law (the preventive law) is the way to materialize the law (law) in each case.

# ‘TO THE LAW MACHINE’ REVISITED: A SURVEY & ANALYSIS OF METHODS AND TECHNIQUES FOR AUTOMATION IN THE LEGAL WORLD

—Avinash Ambale\*

**Abstract** *Artificial Intelligence (AI) in Law has a long history of research dating back to at least 1958. Despite decades of work, Artificial Intelligence has not scaled out of academia to real-life courtrooms and mediation chambers. The reason, in our opinion is: theory of learning in computation has only recently caught up with adversarial inference or defeasible logic, a form of social learning widely used both in theory and practice of common law. We posit that Artificial Intelligence that uses Causal Inference models (a quantum leap from defeasible logic) approximate social learning very well. They provide a quantitative formulation for assignation of legal liability. We opine that mathematical formulations of non-zero-sum Game Theory could provide alternative dispute resolution (ADR) mechanisms for Consumer Law. The central theme of this paper is an analysis of the theory (logic & mathematics) of learning, i.e., epistemology in computation and jurisprudence, individually and at their intersection. In our analysis, we find mathematical models are finally approximating real-life dispute resolution. However, these require legal documents to be in standardized, formal language. The models cannot comprehend the wide variety, style and format of legal documents. We prescribe standardized document interchange and markup formats. Without these standardized inputs, Artificial Intelligence cannot automate negotiations & the decision process. It will fail to meet expected outcomes – provision of voluminous, consistent & speedy ‘access to justice’ in Consumer Law ODR.*

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## I. INTRODUCTION

Let us imagine a lawyer's chambers. To further indulge our imagination, the lawyer is behind an invisible pane of glass, both unseen and unheard. The only mode of interaction with the lawyer is by text. Below the pane of glass, there is an envelope sized slot, similar to ones at box office counters. You slide a note with questions in text format into the slot and retrieve textual legal opinions from this slot. Futuristic? Hardly – this consultation machine was extensively researched, symbolic logic derived & representational Boolean binary code for computing created in 1958. What is significant about 1958?

## II. STRUCTURE

The answer to that question is the first section on the History of AI & Law in our literature review in this paper. The second section will describe computing epistemology for social learning similar to the adversarial system in the law. In the third section of this paper, we will look Causal Inference models and Game Theory models for Online Dispute Resolution. In the fourth section of this paper, we will look at possible reasons why AI has not scaled into real-life mediation chambers and court-rooms. In the concluding section, we will look at possible ways forward.

## III. ASSUMPTION, DEFINITIONS & INTERPRETATION OF TERMS

1. The sleight-of-hand of the invisible lawyer serves the author's purpose of a Turing Test<sup>1</sup> for law.
2. The systematic logic or mathematical models for theory of learning, i.e., epistemology of legal thought can be executed on computing machines. Hence, we argue that all AI we illustrate in this paper, except one in an adjudicative setting is applicable to Online Dispute Resolution (ODR). To the argument that Online represents the internet as we commonly know it; we present the semantic argument that AI is computed on inter-connected networks – public or private, of computers and is symbolically represented in a connectionist model.

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<sup>1</sup> Wikipedia Contributors, "Turing Test", (Wikipedia, The Free Encyclopedia 2 September 2019, 18:57 UTC), <[https://en.wikipedia.org/w/index.php?title=Turing\\_test&oldid=913708188](https://en.wikipedia.org/w/index.php?title=Turing_test&oldid=913708188)> accessed September 12, 2019.

The only technical difference is the presentation layer: one, the pane of glass that could be a computer screen and two, the input/output slot for textual messages that could be electronic or written text. Hence, the AI i.e., systematic logic we discuss in this paper can be read as applicable to Online Dispute Resolution with only the presentation layer as a perceptual difference between what we commonly think of as Online and Offline.

3. We submit that we have liberally interpreted the terms law and legal to mean both the adjudicative law process and Alternative Dispute Resolution (ADR) process throughout the text.
4. In our definition, any set of human thought or decision-making processes that can be represented by mathematical constructs and symbols - with or without their embodiment in computer language - represents an Artificially Intelligent system. Our additional requirement for an AI System is one that continuously & automatically updates itself from available data; rather than being a static, rule-based system that does not update its mathematical model. Due to this requirement, we will exclude rule-based ODR systems like eBay Resolution Center & Modria ODR from this analysis.

Due to the common & popular conflation of the terms Artificial Intelligence and Deep Learning; throughout this text, when we refer to AI in general, we mean only the Deep Learning or Artificial Neural Network sub-field; not Machine Learning or other sub-fields.

While we might seek to pit zero-sum game Neural Networks against non-zero-sum game formulations; both hew to our definition of an AI, in that they are based on underlying mathematical constructs.

AI and (&) Law is to be read as AI applied to Law to distinguish it from AI in general.

5. “To the Law Machine” was presented at the First Symposium on Mechanization of Thought Processes which explains the title of our paper “To the Law Machine” Revisited.
6. In the context of this paper, it is important to draw a distinction in terminology. Automation is implied to mean a continuously running mechanized process without human intervention. Mechanization is implied to mean automation of an individual or discrete set of independent tasks or thoughts. Machine Intelligence (or machines) and

Artificial Intelligence are used inter-changeably to refer to computerized mechanization of human thought and decisions. Algorithms are implied to mean mathematical models that can be precisely expressed in formalized computer languages.

7. In the context of this paper, we use the term 'balance of probabilities' in a statistical, Bayesian manner; not necessarily and always in the 'civil dispute legal standard' manner.

#### IV. SECTION 1: HISTORY OF ARTIFICIAL INTELLIGENCE AND LAW

What is significant about 1958? It follows 1956 by a mere two years & the significance of 1956 is that it is the official birth year of the field and term 'Artificial Intelligence'<sup>2</sup>. Following the birth of this new field of study, Artificial Intelligence (AI); its founding fathers John McCarthy and Marvin Minsky led the symposium on "the Mechanization of Thought Processes"<sup>3</sup> to collate, curate and present the work of a wide variety of scientists from various disciplines working towards a Mechanistic view of Thought Processes.

In 1958, at the very first symposium on "Mechanization of Thought Processes", Dr. Lucien Mehl, a Maitre Des Requets to the Council of State, France presented his paper on "Automation in the Legal World"<sup>4</sup>. This was a logical framework with associated symbolic language to create both an Information Machine and a Consultation Machine. To Dr. Mehl, the goal of the Information Machine was to achieve a speedy, accurate & reliable information retrieval mechanism to free up time for proper legal research and logical thought. His motivation to create an Information Machine was the ever growing (at an alarming scale in his own words) scale of the number of laws and regulations & scope of jurisprudence. The goal of the Consultation Machine was to bring to legal science, the mathematical tools to create a

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<sup>2</sup> Kaplan A. and Haenlein M., "Siri, Siri, in My Hand: Who's the Fairest in the Land? On the Interpretations, Illustrations, and Implications of Artificial Intelligence" (2019) *Business Horizons*, 62(1), 15, 25.

<sup>3</sup> *Mechanisation of Thought Processes: Proceedings of a Symposium Held at the National Physical Laboratory on 24th, 25th, 26th and 27th November 1958* (National Physical Laboratory).

<sup>4</sup> Mehl, L., "Automation in the Legal World: From the Machine Processing of Legal Information to the 'Law Machine' ", *Mechanisation of Thought Processes: Proceedings of a Symposium Held at the National Physical Laboratory on 24th, 25th, 26th and 27th November 1958* (1959, Vol. II, Her Majesty's Stationery Office, London) pp. 755–787.



systematic logical argument for legal problems whose solutions could unambiguously be drawn from available data.

In the introductory notes to his seminal work, Dr. Mehl describes a problem with the multiplicity of legal sources, a problem that persists to date. As an example, the governing laws and jurisdictions might be provincial, federal or global. The laws might be manifested as governing edicts laid by legislating bodies or as treatises and reviews by judicial authors; across a wide variety of documents such as contracts, treaties, laws and decrees. We will look at these issues in Section 4 of this paper on the challenges of AI & Law.

Dr. Mehl recommended a codification of texts from divergent sources of law – legislature, statutes or jurisprudence - into a common, harmonized standard prior to automation. Following Max Weber’s theory of rationalization as a precursor to mastery by calculation<sup>5</sup>, specifically interpreting it as machine driven calculation; we infer that rationalization through codification of sources of law is an essential step preceding mechanization of legal thought. Like Dr. Mehl, we will not describe how to codify the divergent sources of law in this section. Unlike Dr. Mehl, we will look at a few efforts at codifying legal knowledge in Section 4 of this paper.

Dr. Mehl’s basic premise and underlying epistemological inference is that the body of law can be reduced to a few basic or elementary concepts. Or, to construct his argument differently, a limited set of elementary concepts expands into the wide body of legal knowledge. Dr. Mehl’s breakthrough was ground-breaking. He modelled elementary legal concepts as moving in an arithmetic progression. Simultaneously, he modeled data, notions, situations and problems evolving from these basic concepts as increasing in a dual exponential fashion. This unified model laid the systematic logical basis for expressing legal language in a Boolean binary framework. Using Boolean operators to construct dual exponential functions and deconstruct to arithmetic progression made possible the translation of legal language into computerized codification; thereby laying the foundations for mechanization and automation of Law.

Dr. Mehl showed that in cases of trade law - with just 6 basic concepts, there are 64 logical combinations and 16 quintillion (10 followed by

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<sup>5</sup> Sung Ho Kim, *Max Weber’s Politics of Civil Society*, [*The Stanford Encyclopedia of Philosophy* (Winter 2017 Edition)] <<https://plato.stanford.edu/archives/win2017/entries/weber/>> [accessed 12 September 2019].

18 zeros) logical functions. Calculating 16 quintillion logical functions for Dr. Mehl's illustrated case of tax computation of goods sold by a trader was impossible for the computing power available in the late 50s. It follows naturally that the technical implementation of this AI in trade dispute settlement was not feasible. Nonetheless, the ability to deconstruct and reconstruct legal language into Boolean operators is an extremely strong legacy to build AIs for Law.

Shifting forward in time, let us look at the work of another leading figure in AI & Law, L Thorne McCarty and his TAXMAN AI<sup>6</sup>. L Thorne McCarty took his work forward from Dr. Mehl's "elementary concept" logic foundation. McCarty created computer representations of legal concepts in a very narrow area of US Corporate Tax Law – the re-organization of corporations. McCarty used abstract symbolic representations to model legal concepts due to the ability of these abstractions to be linked to computational structures. McCarty used corporate tax law as the area of law for implementation of computer models as, in his view, it has many layers of commercial abstraction that are "artificial and formal systems themselves, drained of much of the content of the ordinary world", and because, by legal standards, it is very technical.<sup>7</sup> McCarty's TAXMAN<sup>8</sup> is one of the first computer embodiments of the systematic logical models for legal reasoning.

His choice, in 1972 of a narrow area of law that is an abstraction and hence lending itself to be modelled easily in computer language analogy seems prescient even in 2019. Current state-of-art of AI through Deep Learning is ANI (Artificial Narrow Intelligence), i.e., it has the ability to out-perform human intelligence in narrow tasks like image classification. From that perspective, selecting a narrow and deep area of focus in the law seems to serve the cause of AI & Law better than a broad, Grand Unified Theory for codification of all law and justice. Seeking a Grand Unified Theory to codify and automate all areas of law is like seeking Artificial General Intelligence (AGI).

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<sup>6</sup> L. Thorne McCarty, "Reflections on TAXMAN: An Experiment in Artificial Intelligence and Legal Reasoning", (1977) *Harvard Law Review*, Vol. 90, March 1977, No. 5.

<sup>7</sup> L.T. McCarty, "Some Requirements for a Computer-Based Legal Consultant", Technical Report LRP-TR-8, Laboratory for Computer Science Research, New Jersey: Rutgers University.

<sup>8</sup> The TAXMAN program was written in 1972–73 and first discussed in a paper presented at the Workshop on Computer Applications to Legal Research and Analysis, Stanford Law School, April 28–29, 1972.

McCarty's observation that "simplest legal problems of first-year law students are the hardest for AI because they require ordinary human experience, which is so alien to AI, but inherent to students."<sup>9</sup> seems prophetic. Artificial Intelligence (Deep Learning) has not progressed to the stage where it can replicate human learning and experience. Differences between Deep Learning and human learning include the inability of the former to learn causal models of the world from very little data leveraging prior knowledge<sup>10</sup> (a theme we will progressively detail before going to causal models in Section 3).

We are chronicling the history of thought underlying both AI & Law and AI in general to illustrate and differentiate the theory of knowledge underlying both. So far, we have looked at the first two decades of AI & Law by way of two seminal works. These two decades are also the first two decades of AI in general.

We will now turn our attention to work on AI & Law in the 80s and 90s. The most significant feature of these decades and continuing till the 2010s is a characterization of the period as an AI winter. AI winter, like all hype cycles starts with pessimism in the research community, amplified several times over by pessimism in general media culminating in a funding freeze by investors – private & public.

In the backdrop of the severe funding freeze for research and development of AI in general, we see the establishment of the first International Conference on Artificial Intelligence and Law (ICAIL) in May 1987 at Boston, Massachusetts<sup>11</sup>. The first ICAIL is widely regarded as the birth of an AI & Law research community with a truly international forum to present their research findings at the intersection of AI and law.

The first ICAIL marks not only the establishment of a robust AI & Law research community, but also a move towards a connectionist logical model away the underlying abstractionist models of Dr. Mehl and L. Thorne McCarty. The argument for connectionist approaches was the failure of various symbolic systems to model abstract legal concepts. Connectionist approaches were proposed as a resilient architecture to wrangle the

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<sup>9</sup> McCarty, (n 6), p. 27

<sup>10</sup> Brenden M. Lake, Ruslan Salakhutdinov and Joshua B. Tenenbaum, "Human-Level Concept Learning Through Probabilistic Program Induction" (2015) *SCIENCE*: 1332–1338.

<sup>11</sup> Bart Verheij, Enrico Francesconi, Anne Gardner, "ICAIL 2013: The Fourteenth International Conference on Artificial Intelligence and Law" (2014) <<https://www.aaai.org/ojs/index.php/aimagazine/article/view/2523/2429>> [accessed 12 September 2019].

incomplete and inconsistent set of rules and descriptions that characterize Law. Connectionist models draw from computational neuroscience and are restricted to the study of individual human brains, in the author's opinion. Concepts like mirror neurons that are attributed to associative<sup>12</sup>, inter-personal or social learning has not been incorporated into the theory of computing epistemology yet.

Connectionist models represent a divergence from defeasible reasoning or adversarial inference model in legal thought. Adversarial inference is a form of inter-personal or social learning. Its manifestation, in legal theory and practice is characterized by progressive learning of the Truth or Knowledge through an interaction of a minimum of three parties - the judge, the prosecution and the defense.

Artificial Neural Networks alternately labelled Deep Learning are computer embodiments of the connectionist approach that knowledge 'emerges'<sup>13</sup> from the various connections of neurons similar to the human brain. We will return to Deep Learning and how a divergence away from legal theory of adversarial learning leads to an inadequate modeling of the legal system in Section 2. For the rest of this section, we will take a quick look at a few notable AIs in Online Dispute Resolutions with a discourse on their underlying systematic logic.

Softlaw by Peter Johnson and David Mead<sup>14</sup> is an online legal expert system released in the early 90s to serve legislation to public consumers. The objective was to simplify the internal logical complexity of legislative provisions for non-lawyer consumers. The motivation to achieve this is misinterpretation of legislative legal text - treating a disjunction as a conjunction, misinterpreting the order of evaluation of logical expressions or failing to recognize a double negative - can have dire consequences<sup>15</sup>. Softlaw aimed to address these dire consequences through a rigorous, 4-stage, systematic model. In Step 1, Softlaw created a verbatim model of legislation that includes all and only subject legislation. In Step 2, Softlaw took the path of creating overview of effect of legislation and avoiding all shortcuts in

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<sup>12</sup> Kosonogov, V., "Why the Mirror Neurons Cannot Support Action Understanding" (2012), *Neurophysiology*, 44 (6): 499–502.

<sup>13</sup> The author has emphasized Emerges to draw attention to emergent behaviour that is a rigorous mathematical model of the saying "The whole is greater than the sum of the parts".

<sup>14</sup> Peter Johnson, David Mead, "Legislative Knowledge Base Systems for Public Administration: Some Practical Issues," (1991) ICAIL 91, 108–11.

<sup>15</sup> Layman Allen, Charles Saxon, "Some Problems in Designing Expert Systems to Aid Legal Reasoning" (1987) ICAIL, 94.

modeling logic. In Step 3, the authors acknowledge that the bulk of difficulty in interpreting legislation is due to the complexity of its structure. Hence, they created a systematic logical model for the explicit modeling of structure to complement the verbatim modeling of subject of legislation in Step 1. Step 4 allowed a separation of rule types to separate the structure of legislation from the meaning of certain words and from the function of judicial pronouncements on the interpretation of those words.

Softlaw was acquired by Oracle Corporation and forms the basis for Oracle Policy Management. In the view of Adam Z. Wyner, Associate Professor in Law and Computer Science at Swansea University; the AI & Law community has not followed suit with similar open-sourced tools for research and development despite the commercial success of Softlaw/Oracle Policy Management.

In 1997, R.P. Loui presented the Room 5 system at ICAIL. Room 5 was an online legal expert system to allow users to argue legal cases. Their goal was to facilitate discussion of pending US Supreme Court cases by the broader, non-legal trained citizenry<sup>16</sup>. It is the opinion of the author that R.P. Loui's work on community participation is either parallel to, or a precursor to Cass Sunstein's works on prediction markets<sup>17</sup> and wisdom of the crowds<sup>18</sup>. Room 5 had an underlying systematic logic based on nested tables rather than the more common decision tree structures. Room 5 was used to demonstrate an online resolution of a simple stolen goods dispute in the case of a juvenile offender with pros and cons arguments for the approach. It is the opinion of Bart Verheij, President of the International Association of Artificial Intelligence and Law (IAAIL) and Chair of Artificial Intelligence and Argumentation at the University of Groningen that Room 5's nested arguments is a superior representation as it does not readily allow for the graphical representation of what Pollock famously refers to as the undercutting argument.<sup>19</sup>

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<sup>16</sup> R.P. Loui, J. Norman, J. Altepeter, D. Pinkard, D. Craven, J. Lindsay, M. Foltz, "A Testbed for Public Interactive Semi-Formal Legal Argumentation", (1997) ICAIL, 207–214.

<sup>17</sup> Cass R. Sunstein, "Deliberating Groups Versus Prediction Markets (Or Hayek's Challenge to Habermas) Episteme, Forthcoming" University of Chicago Law & Economics, Olin Working Paper No. 321; University of Chicago, Public Law Working Paper No. 146 <<https://ssrn.com/abstract=956189>>.

<sup>18</sup> Disclosure: The author has a granted US Patent US9033781B2 Robert Craig Steir, Michael Scott Brewster, Avinash Viswanath Ambale, "Designing A Real Sports Companion Match-Play Crowdsourcing Electronic Game".

<sup>19</sup> Douglas Watson, *Argumentation Methods for Artificial Intelligence in Law* (2010), Springer-Verlag.

We now introduce the concept of defeasible logic or adversarial inference in the theory of knowledge. John Pollock, the father of defeasible logic or “Mr. Defeasible Logic” did not have much interest in the theories of legal reasoning though his formal, systematized logic and correspondent mathematical representations have a wide impact in the field of Artificial Intelligence and Law. This marks a clear line-in-the-sand to establish a timeline for AI & Law. Both in terms of chronological timeline and systematic logic timelines; what we have looked at is historical, yesterday’s AI. In the next section, we will look at Today’s AI & Law.

## **V. SECTION 2: DEFEASIBLE LOGIC OR ADVERSARIAL INFERENCE**

In the previous section, we looked at the history of systematic logic underlying both AI and law by way of illustrative examples of the computer manifestations of those logical constructs. We introduced the concept of defeasible logic or adversarial inference at the end of the last section and a clear, epochal shift in the timeline of Artificial Intelligence and Law that we characterized as Yesterday’s AI.

Yesterday’s AI did not unlearn when presented with conflicting information i.e., they do not use adversarial inference to progressively (socially) learn. Using yesterday’s AI for Law with an “individual-brain” connectionist model is like a one-sided justice system without inter-connected or social, adversarial learning. Yesterday’s AI only computes forward probability. Given a hypothesis, it will match evidentiary patterns across huge volumes of data.

Deep Learning, in most of its incarnations constitutes Yesterday’s AI. In statistical terms, conventional Deep Learning networks demonstrate prosecutor’s fallacy. Imagine this scenario in a courtroom. The prosecutor has previously introduced uncontested evidence to the court. Prosecutor questions an expert witness, “given the evidence, what is the probability that the defendant is innocent?” The expert witness says, “the odds of finding this evidence on an innocent man are so small that the court can safely disregard the possibility that the defendant is innocent”<sup>20</sup>

We owe to Thomas Bayes, a statistician and Presbyterian minister who answered theological questions with statistical rigour – the Bayes theorem

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<sup>20</sup> Fenton, Norman; Neil, Martin; Berger, Daniel, “Bayes and the Law” (June 2016), Annual Review of Statistics and Its Application, 3: 51–77.

that calculates the probability of a cause aka verdict (guilty or innocent) from the evidence aka effect. It is fairly straight-forward to compute forward probability, i.e., if we decide the cause (guilty), to compute probability of the effect aka evidence. Computing inverse probability, i.e., cause from effect (verdict from evidence) is not only not intuitive, but also tricky.

Using Bayes theorem, the defense counters, “if it might please the court, the prosecution obscures the fact that the probability of the defendant’s innocence is significantly different than presented. His innocence depends not just on the probability of said evidence; but on the likely higher prior probability of his innocence, the explicitly lesser probability of evidence in the case he was innocent as well as the cumulative probability of the evidence being on the defendant”.

A symbolic representation of the same in mathematical construct is below

$$P(H/E) = \frac{P(H) \times P(E/H)}{P(E)}$$

P (H/E), {i.e., Probability of Hypothesis (Innocence or Guilt) Given (the/operator signifies given) Evidence} = P(H) {i.e., Prior Probability of Hypothesis} Multiplied by P(E/H) {i.e., conditional probability of Evidence given Hypothesis} Divided by P(E) {i.e., Probability of Evidence}

Restating the defense’s assertion in mathematical terms,

$$P(H/E) \neq P(E/H)$$

The legal fraternity might benefit from looking at Meadow’s Law and its egregious misuse of the prosecutor’s fallacy in securing wrongful death claims against mothers for infant deaths.<sup>21</sup>

It is the author’s opinion that this measure of uncertainty or conditional probability is missing from current neural network (Deep Learning) architectures. Bayesian networks provide a more robust and resilient architecture to represent Law because it incorporates inter-personal or social Learning and not just the “individual-brain” connectionist model of Deep Learning.

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<sup>21</sup> Wikipedia contributors, “Meadow’s Law”, (Wikipedia, The Free Encyclopedia 30 July 2019, 17:02 UTC), <[https://en.wikipedia.org/w/index.php?title=Meadow%27s\\_law&oldid=908583734](https://en.wikipedia.org/w/index.php?title=Meadow%27s_law&oldid=908583734)> [accessed 13 September 2019].

The doctrine of adversarial inference in common law seems tailor-made for the application of Bayesian networks. There is sparse or no documentation on the influence Thomas Bayes and his work had on the origins of the adversarial system in England. The author stipulates his prosecutor's fallacy in finding a link, however tenuous and notes that Thomas Bayes passed away in 1761, a year after Sir William Garrow, whose reforms helped usher in the adversarial legal system was born in 1760.

We called Deep Learning in most of its incarnations as Yesterday's AI earlier in this section. Aided by celebrity scientists and super-successful entrepreneurs, advances in Deep Learning are breathlessly shilled by media as the end-point of evolution of homo sapiens in stories with headlines about Robot Overlords and Singularity. The theory of learning of Yesterday's AI cannot accomplish what Courts in England could achieve two centuries ago; that of unlearning when presented with conflicting information and computing a balance of probabilities, i.e., inter-personal or social Learning.

If we pair yesterday's AI which matches evidentiary patterns to hypothesis with another AI that generates alternate hypotheses from evidence (data), we have Today's AI<sup>22</sup>. This competing dyad of Neural Networks is aptly named Generative Adversarial Networks (GANs), in a seeming nod to the adversarial system in common law. The two AIs are competing to optimize diametrically opposing functions in a zero-sum game; but, they are agnostic to the outcome. The outcome is discovery of the Truth or in Sir William Garrow's dictum "Presumed Innocent till proven guilty". We finally begin to see the incorporation of inter-personal or Social Learning into Artificial Intelligence in general; these are not Bayesian Deep Learning networks, yet. In reality, GANs have largely been used from 2018 onwards in only a very limited set of applications. One is accelerating drug discovery for diseases. This seems to be the only application area with positive societal impact. GANs have been garnering a lot of media attention primarily for questionable societal impact by the creation of Deep Fakes and forgery of fine art<sup>23</sup>. While the underlying logical model seems to have converged; implementations of computational law using these models don't seem to have

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<sup>22</sup> The term Today's AI is deliberately mislabelled. It is not widely used yet (September 2019) and is possibly Tomorrow's AI. However, we mislabel this to show the epochal shift from Today's AI (that is really Tomorrow's AI) using Adversarial Inference and Tomorrow's AI (that is really day-after-tomorrow's AI) and uses causal inference models.

<sup>23</sup> Karen Hao, "Inside the World of AI that Forges Beautiful Art and Terrifying Deepfakes" <<https://www.technologyreview.com/s/612501/inside-the-world-of-ai-that-forges-beautiful-art-and-terrifying-deepfakes/>> [accessed 13 September 2019].



converged. There is very scant to little published research on the application of GANs to dispute resolution – adjudicative or ADR.

Conventional Neural Networks (Deep Learning) that gets giddy media attention for surpassing human skills in image classification works by using single point-estimates. These single point-estimates are used as weights to classify images. Creating a Deep Learning mechanism that uses probability distribution to truly mimic Bayesian adversarial learning is computationally very expensive. We will not get into the trenches of the mathematics and relative costs & benefits of GANs and Bayesian Neural Networks. Instead, we will shift gears in Section 3 to look at causal inference models that represent a quantum leap up from Bayesian networks. We will look at recently published research that models causal inference from a real-life case to firmly establish cause-in-fact. These mathematical models establish cause-from-effect and interestingly, cause-from-multiple effects; a case of over-determination.

In Sections 1 and 2, we have seen the systematic logic underpinning AI & Law and how they diverged. Section 2 on Today's AI shows the convergence of centuries old legal thought to the systematic logic of adversarial inference (social) learning. In the next section, we will look at Tomorrow's AI that goes a step beyond balance of probabilities to firmly establish causation. We will also look at game theory models for their application to Online Dispute Resolution.

## VI. SECTION 3: CAUSAL INFERENCE MODELS & GAME THEORY

Tomorrow's AI goes beyond balance of probabilities to establish causation. Theoretical work on causal inference was presented at the ICAIL in June 2019<sup>24</sup>. A causal inference AI used the landmark *Heneghan v. Manchester Dry Docks*<sup>25</sup> case to identify and evaluate cause-in-fact. This AI focused on over-determination, i.e., which of the more than one causes leads to one outcome. Asbestos exposure was among 8 other causes modelled to evaluate effect on adenocarcinoma/lung cancer. The causal effect of 'what' caused the adenocarcinoma and 'who' among the multiple employers caused it were determined through these causative models.

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<sup>24</sup> Ruta Liepina, Giovanni Sartor and Adam Wyner, "Evaluation of Causal Arguments in Law: The Case of Overdetermination" (2019) ICAIL.

<sup>25</sup> *Heneghan v. Manchester Dry Docks Ltd.*, 2014 EWHC 4190.

This research had two objectives and associated rationales. One, there is a lot of debate at both semantic and metaphysical levels about the definition of causation<sup>26</sup>. Hence, the objective was to create a systematic logical model, represented in mathematical language for causation and associated legal liability. This would counter the inadequacy of the traditional “but-for” tests in cases of over-determination. Two, existing case precedent<sup>27</sup> is a policy-based, ‘material contribution’ exception without a quantitative basis to define ‘material contribution’. Hence the objective was to define, by effect-to-cause mathematical models; a quantitative basis for material contribution to the effect where multiple contributors have caused effect.

The research looked at three separate sub-fields of Artificial Intelligence, one – Causal inference and computation of Causal Calculus for a NESS test<sup>28</sup> (Necessary Element of Sufficient Set of causes), two – Evidential reasoning to use causal stories and evidential arguments to analyse competing positions as a hybrid theory<sup>29</sup> and three – Argument schemes that analyse common reasoning patterns in arguments with critical questions to evaluate the strength of the arguments.<sup>30</sup>

## VII. FACTS OF THE CASE

In 2011, Mr Heneghan started displaying symptoms of lung cancer. He died in 2013 due to adenocarcinoma – a malignant lung tumour. His estate claimed compensation for wrongful death caused by exposure to asbestos against 6 of the 10 employers he was employed at between 1961 and 1974. Mr Heneghan was a cigarette smoker, as well.

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<sup>26</sup> Michael S. Moore, “Causation and Responsibility: An Essay in Law, Morals, and Metaphysics” (2009) OUP.

<sup>27</sup> The rationale for a quantitative basis for “material contribution” is a policy-based exception in the case of overdetermination in the landmark *Fairchild v. Glenhaven Funeral Services Ltd.*, (2003) 1 AC 32 : (2002) 3 WLR 89 : 2002 UKHL 22. Mr Fairchild had worked for a number of employers who had negligently exposed him to asbestos, eventually leading to his death from malignant mesothelioma. It was impossible to point out which of the employers exposed him to asbestos leading to his mesothelioma. The traditional test of causation, “on the balance of probabilities” was deemed inadequate to establish causation to a single employer. The judgment of the House of Lords was “the appropriate test of causation is whether the employers had materially increased the risk of harm to the claimants” – a ruling enshrined as the Fairchild Exception.

<sup>28</sup> Alexander Bochman, “Actual Causality in a Logical Setting” (2018) IJCAI, 1730–1736.

<sup>29</sup> Floris J. Bex, Peter J. Van Koppen, Henry Prakken, and Bart Verheij, “A Hybrid Formal Theory of Arguments, Stories and Criminal Evidence” (2010) *Artificial Intelligence and Law*, 18(2): 123–152.

<sup>30</sup> Douglas Walton, *Argumentation Methods for Artificial Intelligence in Law* (2005) Springer Science+Business Media.

**Commentary:** This case is justifiably complicated due to the multiplicity of causes – cigarette smoking, multiple contributors of asbestos exposure, long latency period between asbestos exposure and morbidity, various alternative causes and confounders. Does the court use the conventional, strict burden-of-proof requirement or does it use the Fairchild exception? Does the court rely on the testimony of expert witnesses who use the Helsinki criteria<sup>31</sup> to compute estimates of each employer/defendant’s individual ‘material contribution’ as ranging from 2.5 to 10.5% - limits deemed to materially increase the risk of contracting the disease?

The research based on causal inference and argumentation schemes created a quantitative calculus to algorithmize the complicated decision-making.

The causal inference model went one step beyond the judge who ignored the smoking history of Mr Heneghan. It created two causal models: one for asbestos exposure and another for smoking and added proportional values to the combination of these causal models. It is unable to verify, with exactitude, which of the asbestos fibres caused the cell mutation leading to lung cancer. Hence, evidentiary considerations were not argued due to the strict ‘burden-of-proof’ requirements. Instead, the claimants sought to use the relaxed Fairchild exception; hence there was no evidentiary data to build up the evidential model hybrid theory.

Using Causal Calculus from NESS theory along with mathematical set theory, the researchers established mathematical formulae for the eventual decision. These formulations algorithmized the NESS test evaluation whether an element in a set is a sufficient contributory cause from the set of all causative elements.

In summary, this research has conclusively demonstrated the ability to create a hyper-rational, mathematical model of decision-making, specifically in tortious injury cases with many contributing causes and confounders. Though tested in a lab setting, this AI demonstrates ability to build causal models from limited data – an inability of Deep Learning that we looked at in Section 2. These models can be applied to achieve uniform outcomes with or without human heuristics. (we will look at heuristics in Section 4) Causal Inference models, by incorporating social learning (and, in this case

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<sup>31</sup> Editors: Panu Oksa, Henrik Wolff, Tapio Vehmas, Paula Pallasaho and Heikki Frilander, “Asbestos, Asbestosis, and Cancer: Helsinki Criteria for Diagnosis and Attribution 2014” (2014) <[www.julkari.fi/bitstream/handle/10024/116909/Asbestos\\_web.pdf](http://www.julkari.fi/bitstream/handle/10024/116909/Asbestos_web.pdf)> [accessed 13 September 2019].

social learning from more than 7 opposing parties, their respective counsel, a jury and the judge and appeals court judges) move away from the rigid, individual-brain connectionist models underlying Today's AI, i.e., Deep Learning.

In the section on the History of AI & Law, we looked at AI applied outside the adjudicative process in areas of law like tax law – trade and corporate, legislative law outreach, and citizen-law. We took a brief detour into the adjudicative process and tort law earlier in this section to illustrate latest advances in computational research applied to law. With computational research catching up to centuries-old legal thought; we have adversarial inference and causal inference computation models. These models are necessarily zero-sum even if the outcome is serving the cause of justice. The application of these computational models to ADR, specifically consumer law needs further research. We will return to the hyper-rationality basis of AI and how that conflicts with the conception of social justice through a game theory concept. But, first a primer on game theory, specifically non zero-sum games with an illustrative example of online dispute resolution in consumer law.

To introduce game theory, let us look at economics – specifically the economics of marketplaces where consumers and retailers electronically trade goods; by definition e-commerce. Classical economics of Adam Smith applied to a two-way e-commerce market-place is a zero-sum game – one party has to lose for the other to win. In this formulation, unbridled competition in this marketplace delivers best results. Which means either retailers see their margins progressively erode to zero; or consumers see a progressive inflation in prices of goods sold<sup>32</sup>. In Adam Smith's conception, competitive behaviour drives market equilibrium. John Nash, through his famous Nash Equilibrium shows competitive behavior is a non-optimal equilibrium. The impact of John Nash on game theory cannot be overstated. In the context of his paper "The Bargaining Problem", John Nash created a mathematical construct for maximizing utility for cooperative negotiators aka non-zero-sum games. This mathematical construct is widely used in problems from economics to political science. ODR, being a subset of ADR with its focus on win-win settlements outside the adjudicative process is well suited for applications of non-zero-sum game theories.

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<sup>32</sup> Let us set aside the fact that e-commerce marketplaces are not completely neutral as they skew the market either by providing their own captive supply or by artificial spikes in demand through incentives.

In micro-economics, utility maximization is defined as a problem consumers face: “how do we spend our money to maximize our utility?”. In a marketplace where consumers are in a cooperative bargaining situation with retailers; utility maximization is a two-person game of negotiation. In Nash’s mathematical formulation of the bargaining solution; both players get their status quo payoff (i.e., noncooperative payoff) in addition to a share of benefits occurring from the cooperation.<sup>33</sup>

Nash had a set of mathematical axioms (that we will not go into in this paper) as absolutes to be satisfied to maximize utility for both players. An optimal equilibrium that satisfies those axioms are precisely the points  $(x, y)$  in  $\mathcal{F}$  that maximize the expression

$$(u(x) - u(d))(v(y) - v(d))$$

$u$  and  $v$  are utility functions of Players 1 and 2 respectively.  $d$  is a disagreement outcome.

In this formulation  $u(d)$  and  $v(d)$  are status quo utilities that either player enters into if they decide not to bargain with the other player.

This is a very elegant mathematical representation of the disagreement outcome or dispute hence validating their application in ADR, specifically mediation as applied to consumer law in marketplaces. However, Nash’s bargaining problem seeks to maximize overall good without any regard to equitable distribution of benefits. This is in direct contrast to John Rawls’ “maximizing the minimum utility” outlined in his Theory of Justice. We will see that conflict articulated in an eNegotiation system, Family Winner further below in this section.

Following John Rawls’ and Howard Raiffa’s maximin principle<sup>34</sup>, a rigorous mathematical model for Negotiation of Multi-Objective Water Sources Conflicts was created<sup>35</sup>. This forms the basis for a commercial implementation of an automated eNegotiation tool for ODR in consumer law, specifically e-commerce, SmartSettle. SmartSettle enhances Nash’s bargaining problem by removing the need for each player in the two-person game to know the other’s preferences. This work is patented and implemented as

<sup>33</sup> Nash, John, “The Bargaining Problem” (1950), *Econometrica*, 18 (2): 155–162.

<sup>34</sup> Howard Raiffa, *The Art and Science of Negotiation*, (1982) Belknap Press of HUP.

<sup>35</sup> Thiessen, E.M., and D.P. Loucks, “Computer-Assisted Negotiation of Multi-Objective Water Resources Conflicts” (1992) *Water Resources Bulletin*, American Water Resources Association 28(1), 163–177.

the SmartSettle eNegotiation System<sup>36</sup>. SmartSettle released in the early 90s lacks live applications per their 2016 press release.<sup>37</sup>

In the early 90s, another eNegotiation system, Family Winner was created at Victoria University, Melbourne, Australia. The objective was to avoid trial law and the associated zero-sum games in settling Property Claims in a Divorce Settlement. The researchers<sup>38</sup> observe a fundamental conflict in building eNegotiation systems like Family Winner – is the system concerned with providing justice or supporting mediation?

Family Winner uses both game theory concepts and heuristics. We will take a brief look at heuristics in Section 4. Family Winner automatically computes trade-off rules from input information of importance values, i.e., the degree to which each party desires the undivided marital asset. The basic assumptions in Family Winner are: one, dispute can be modeled using Principled Negotiation; two, weights can be assigned to each of the issues in dispute and three, sufficient issues are in contention for each party to be compensated for losing an issue. The detailed mathematical formulation behind this process is beyond the scope of this paper as that would require dozens of pages of explanatory notes.

In real-world trials of Family Winner at the Victoria Legal Aid (VLA) family solicitors' practices; the overriding concern was the bias towards mediation over justice. This follows the logical conflict between John Nash's formulation and John Rawls maximin conceptualization we noted earlier. Further research is required to examine a possible combination of adversarial inference or causal inference that deliver established norms of jurisprudence with maximin non-zero-sum game theory that delivers mediated negotiation settlements as a possible solution for ODR in Consumer Law

In all, despite the spectacular progress of systematic logic and their technology implementations, AI or algorithmic models for eNegotiation have not scaled out of academia into real-life mediation chambers – online or offline. From our description of a Turing test for law in the introduction; we can see AIs successfully passing the test in this section. As we concluded this

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<sup>36</sup> Ernest M. Thiessen, "Computer-Based Method and Apparatus for Interactive Computer-Assisted Negotiations" (1996), US Patent 5,495,412 (ICANS).

<sup>37</sup> <<https://smartsettle.com/2016/03/16/e-commerce/>>.

<sup>38</sup> John Zeleznikow, Emilia Bellucci, "Family Winner: Integrating Game Theory and Heuristics to Provide Negotiation Support" (2003) *Legal Knowledge and Information Systems : JURIX 2003: The Sixteenth Annual Conference*, Bourcier, Danièle, ed., *Frontiers in Artificial Intelligence and Applications*. IOS Press, Amsterdam, 21–30.

section, we came to the premise that despite tremendous logical and computational progress, AIs have not scaled out of academia. In the next section, we will look at some possible reasons why. This following section will be time to focus on the input/output slot below the pane of glass in our version of the Turing Test and the wording of those questions.

#### **VIII. SECTION 4: POSSIBLE REASONS WHY AI HAS NOT SCALED INTO REAL-LIFE COURTROOMS/MEDIATION CHAMBERS**

Celsus in Justinian Digest 1 said “To Know the Law is not merely to understand the words; but as well their force and effect”.<sup>39</sup>

AI stops at lexical analysis, i.e., analysis of word structure, their frequency of occurrence etc. It does not have a semantic understanding of concepts for even everyday language. This sounds like the beginning of a joke – “two professors get on the internet”. But, it was a real-life experiment documented in a peer-reviewed research article about the pitfalls of AI with layman language. Two leading researchers at the intersection of AI & Law<sup>40</sup> perform a Google Search for “Artificial Intelligence” + “Online Dispute Resolution”. The top search results point to either their research articles or conference presentations; leading the researchers to conclude they are THE experts in this field. They try this search with a different string. “Artificial Intelligence” + “On Line Dispute Resolution”.

What a difference a single space between on and line makes. These search results lead them to more scholars with published research. We are talking now about a problem with both AI (Google) as well as with creators/publishers of legal work – scholars and practitioners. If the creator/publisher of the text had added metadata markups to indicate synonyms, Google’s web crawlers could have indexed both and served appropriate search results. And, Almighty Google – a veritable Leviathan of the information age does not have a thesaurus to indicate on-line is the same as on line is the same as online. If this is the state-of-art with Google’s much-vaunted AI prowess with layman language; let us compound the problems a hyperbolic zillion times over for the legal lexicon, semantics and ontology. Among various

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<sup>39</sup> Justinian, Digest, Book 1, Title 3, 17 Quotations in the Langdell Reading Room <<https://hls.harvard.edu/library/about-the-library/history-of-the-harvard-law-school-library/quotations-in-the-langdell-reading-room/>> accessed 13 September 2019.

<sup>40</sup> Arno R. Lodder, Computer/Law Institute, Centre for Electronic Dispute Resolution Amsterdam, Netherlands and Ernest M. Thiessen, SmartSettle ICAN Systems Inc. Vancouver, Canada.

projects to create a standardized legal ontology, The Center of Electronic Dispute Resolution in Netherlands stands out in its work – the BEST project<sup>41</sup> to map legal language to everyday language. The BEST project along with other ODR projects is now wound up due to financial unviability.

But, back to Google and the internet. Way before Google, were the standards – HTML and HTTP. HTML or Hyper-Text Markup Language provides a consistent framework to display any kind of textual content on the internet. With ample support to add plug-ins in a modular fashion, it grew to accommodate video, voice and other media on the internet. HTTP – Hyper Text Transfer Protocol seamlessly transfers data across multiple varieties of internet switches and routers to render them across a wide variety of computers, browsers and mobile apps in exactly the same form. Standardization of the language of the internet, i.e., machine readable and machine executable language led to a proliferation of internet sites; so much so that finding relevant results became impossible. This necessitated search engines and Google, with its superior indexing capabilities has become the de-facto Leviathan of information organization and retrieval. The fly-wheel effect of harmonized, standardized data provides a solid bedrock for the mathematical models of Google's AI to function.

Equivalent markup languages and interchange protocols are lacking in the legal world. Standardization of legal documentation has been attempted and mandated by legislation across different countries. Machine readable and machine executable legal code has been in place for a few decades; but competing standards, lack of enforcement and different stakeholders makes its universal adoption a Holy Grail. For instance, in the EU – there is MetaLex and LKIF. Other than legal scholars and possibly computer engineers; the differences are hard to fathom for legal practitioners or laypeople. MetaLex aims to serve as the lowest common denominator for a common standard for the interchange of data. Confusingly, LKIF – Legal Knowledge Interchange Format calls attention to interchange by its very name but is meant for Interpretation of the Law or Knowledge Representation.

In the US, President Obama mandated all public government documentation to be released in machine readable form; though no specific format was mandated or followed. The Hammurabi project seeks to create a repository

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<sup>41</sup> Elisabeth M. Uijttenbroek, Arno R. Lodder, Michel C.A. Klein, Gwen R. Wildeboer, Wouter Van Steenberg, Rory L.L. Sie, Paul E.M. Huygen and Frank Van Harmelen, "Retrieval of Case Law to Provide Layman with Information about Liability: Preliminary Results of the BEST-Project" (2008) *Computable Models of the Law*, 291–311.



of computable law in the US to enable a law machine to take facts as inputs and return decisions. It started codifying parts of tax and immigration law in the US with a long way more to go. We are back at the beginning of AI & Law in 1958 with Dr. Mehl's law machine and codifying the law. Half-a-century later, progress on codifying the law has not advanced as significantly as progress in the mathematical models to represent legal thought. If we recall Max Weber's maxim from Section 1, "rationalize, then mechanize" – we are still in the stages of codifying the law for it to be machine readable and to be processed by the hyper-rational mathematical models of AI.

So, back to Celsus in Justinian. AI has not understood the words yet; so, it does not know the law. The Law has not presented its words harmoniously and consistently to AI. This mutually assured regression is possibly the single biggest reason why AI & Law has not seen the expected Cambrian explosion.<sup>42</sup>

As to words' force and effect; we will just mention them in this paper as that is worthy of another paper in and of itself. The effect law seeks is justice and equity by way of maximin as John Rawls called it. AIs being rational agents are the opposite; they maximize utility and cannot consider equitable distribution of benefits. As to the laws' force, that we literally interpret as enforcement; AIs bias in recidivism cases directly correlates to AI creators' socio-economic demography.<sup>43</sup>

Let us set aside AI's lack of understanding of words, their force & effect and look at a problem with human decision making – that of bounded rationality<sup>44</sup>. Legal reasoning assumes all participants in conflict are "rational agents". As Cass Sunstein demonstrates through his research<sup>45</sup> at the intersection of behavioural economics and the law; human decision

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<sup>42</sup> We do not explicitly reference the vast volume of thought and scholarship, in and for India, on access to justice and equity for consumers. As technology researchers and practitioners, we think automated eNegotiation in consumer law ODR can help deliver this access at scale. We assume this to be the goals of consumer law ODR community as well.

<sup>43</sup> Jeff Larson, Surya Mattu, Lauren Kirchner and Julia Angwin, "How We Analyzed the COMPAS Recidivism Algorithm" (Propublica May 23, 2016). <<https://www.propublica.org/article/how-we-analyzed-the-compas-recidivism-algorithm>> [accessed 13 September 2019]

<sup>44</sup> Wikipedia Contributors, Bounded Rationality, (Wikipedia, The Free Encyclopedia, 8 September 2019, 22:31 UTC) <[https://en.wikipedia.org/w/index.php?title=Bounded\\_rationality&oldid=914703609](https://en.wikipedia.org/w/index.php?title=Bounded_rationality&oldid=914703609)> [accessed 13 September 2019].

<sup>45</sup> Sanjit Dhami, Ali al-Nowaihi, Cass R. Sunstein, "Heuristics and Public Policy: Decision-Making Under Bounded Rationality" (2018) Harvard Public Law Working Paper No. 19-04 83 Pages Posted: 20 Jun 2018 Last revised: 14 March 2019.

making is not perfectly rational at all times. Human decision-making resolves disputes via several heuristics; heuristics that cannot be represented in Today or Tomorrow's AI (as we labelled it). This is another major topic we will not cover in this paper. Another major reason for lack of commercial implementations of AI & Law is the inability of AI to explain how it arrives at its results. We will not detail the black-box nature of AI nor latest advances in explainable AI in this paper.

## IX. SECTION 5 – WAY FORWARD

It is imperative that we create codification or standardization or machine-readable and executable standards and frameworks like LKIF, MetaLex, Hammurabi for consumer law in India. Not only do we have the problem described by Dr. Mehl with widely different legal documentation requirements, we also have myriad natural languages. The codification working committee should ideally be constituted with a mix of experts from academia, legal practice, judiciary, legislation and data engineers/scientists.

For existing ODR initiatives, it might be advisable to start looking at NLP (Natural Language Processing), a form of AI to automate the processing of free text entries claimants enter via emails or social media or notes in structured web-forms. AI can help build a three-tiered taxonomy of Category, Type & Item – this would help automate the workflow of routing the right problem to the right participant and is an essential first step before an automated eNegotiation or human-assisted eNegotiation. Extracting subject lines from unstructured text automatically could be another use of AI in ODR.

The next step after AI for text inputs would be AI for voice inputs. The same uses as above; but from human voice conversations – encompassing ODR or Online to mean voice interfaces and not just text interfaces. That way the lawyer in our Turing Test can hear and talk. These are baby steps in the usage of AI for Consumer Law ODR; but the steps need to be supported by a solid bedrock of codified consumer law.

# MEDIATION AND CONSUMER PROTECTION

—*Sheetal Kapoor\**

**Abstract** *The Consumer Protection Act, 1986 whose sole purpose was to protect the rights of the consumers and to provide speedy redressal to them has become archaic and does not consider modern day consumer market challenges, especially those dealing with online, teleshopping, product recall, unsafe contracts and misleading advertisements. Further consumer courts in India, are burdened with more than 4.3 lakh pending cases and for petty amounts consumers have to wait for years to get justice. In order to strengthen and empower consumer rights in India The Consumer Protection Bill, 2019 which is considered as a milestone in protecting the rights of the consumers has been passed by the parliament. The New Consumer Protection law repeals and replaces the CPA, 1986 and seeks establishment of Central Consumer Protection Authority, mediation, product liability, and faster redressal by the consumer commissions. The author identifies important questions stemming from the discontinuities in the Consumer Protection Act, 1986, the backlog and pendency of consumer cases and discusses how mediation as proposed in the new law can be a game changer in consumer protection.*

## I. INTRODUCTION

With the advent of digital technologies, increasing penetration of e-commerce, smart phones, cloud and internet, global supply chains, have provided new opportunities for consumers by providing easy access of products and services. But on the other hand, today's consumer is vulnerable to new forms of challenges such as, online fraud, ATM data leak, getting defective, substandard, duplicate, poor quality and unsafe products, predatory prices,

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exploitative and unfair trade and unethical business practices. Further, misleading advertisements especially digital, tele-marketing, multi-level marketing, direct selling and e-tailing are some other challenges which never existed in 1986.

Since the consumer cannot check or verify the claimed features of the product or service by the website it relies on the representations made on the e-portals and many times makes advance payments before receiving or opening the product. Lack of knowledge about the address or location of the website and how and where to file a complaint if the seller dupes them are other problems faced by consumers.

The absence of effective and efficient consumer dispute redressal system can result in lack of consumer confidence in the Justice Delivery System. Consumers find it difficult and expensive to have their disputes settled because most of their claims are of small value and some consumers are low-income earners. The Consumer Protection Bill, 2019 seeks to empower consumers against above mentioned challenges and replaces the three-decade old legislature.

In a developing country like India, Alternative Dispute Resolution Mechanism can be one of the best strategies for quicker resolution of consumer disputes and to lessen the burden on the consumer forums and to provide suitable mechanism for expeditious resolution of consumer disputes. The Consumer Protection Bill, 2019 envisages introducing the process of mediation for speedy disposal of consumer disputes.

The objectives of the study are as follows:

1. To understand the shortcomings in the Consumer Protection Act, 1986, especially delay in consumer dispute redressal and the challenges faced by consumers especially while buying online.
2. To study innovative methods such as mediation in consumer dispute resolution.
3. To examine the skills, constraints and dynamics of the negotiation process in relation to consumer protection.
4. To discuss the provisions of Consumer Protection Bill, 2019 on mediation and its acceptance by aggrieved consumers.

## II. SHORTCOMINGS OF THE CONSUMER PROTECTION ACT, 1986

After more than 30 years of implementing the Consumer Protection Act, it is time to reconsider and rethink whether Consumer courts have been able to deliver as promised. Are the consumers getting speedy redressal? Delay in disposal of consumer cases, non-disposal of cases, lack of manpower and poor infrastructural facilities, are other problems related to Consumer courts. There have been allegations that the lawyers have taken over the consumer forums as the consumer is unaware of the legal procedures and processes and hesitates to plead its case in the consumer courts. The three-tier judiciary is totally dependent on the Department of Consumer Affairs for each and everything including appointment of members and financial support. In disputes between consumers and businesses. Alternative Dispute Redressal (ADR) is emerging as a faster, cheaper and cost-effective method for timely disposal of consumer complaints. Since justice delayed is justice denied, the consumer courts these days are facing the problems of huge pendency and delays in disposal of cases. The consumer courts have been established with the twin objective for speedy redressal of consumer complaints and to establish quasi-judicial authorities unlike civil courts to provide compensation to consumers. But over the years there have been heavy pendency of cases in various consumer courts. Some of the lacuna of the Consumer Protection Act, 1986 are:

- a) The Consumer Protection Act, 1986 although a benevolent legislature whose sole purpose was to protect the rights of the consumers has become outdated and does not consider rapid changes in consumer marketplaces, especially those dealing with online, teleshopping, product recall, unsafe contracts and misleading advertisements.
- b) Section 13 (3A) of CPA, 1986 states that “every complaint shall be heard expeditiously as possible and endeavour made to dispose of complaint within a period of three months from the date of notice by the opposite party and five months if it requires testing of commodities.” But it is seen that due to heavy pendency of cases and frequent adjournments delay in getting justice takes place (The Consumer Protection Act, 1986).
- c) The consumer courts have been overburdened with pending cases and the buyer-seller contract is tilted in favour of the seller. Further the procedures are becoming expensive and time consuming.

Therefore, it is time that ADR and mediation process are being adopted.<sup>1</sup>

- d) The Presidents and Members of the consumer courts constitute the backbone of the consumer dispute redressal system. They play a major role in enhancing the faith of the consumers in the redressal mechanism. But it has been seen that there are more than 400 posts of President and members in various consumer forums which are lying vacant. The State governments do not show any interest in immediately filling up the vacant posts and the issue of consumer protection is not a part of any political parties agenda.
- e) Consumer courts are functioning with staff deputed from other departments who do not have any experience in judicial practices. It is necessary to provide intensive training to the members of the Consumer courts before putting them on the job. The present practice is to provide training after assuming charge as a member.
- f) Many times, it is seen that the award given by consumer courts is very meagre and petty and the consumer has to run from pillar to post to get the orders implemented.
- g) There has been lack of proper coordination among the President and members of the consumer court, for timely adjudication of cases and many times around ten or fifteen adjournments are allowed.
- h) The President of the National Commission or State Commission are not empowered to take up suo motu action in consideration of the damages affecting a sizable number of populations e.g. misleading advertisements.

### **III. ANALYSIS OF THE CASES DISPOSED BY CONSUMER COURTS**

According to the data available from the Department of Consumer Affairs more than 4.3 lakh cases are pending in the various consumer courts, which is an alarming figure. When the consumer courts were formed their main purpose was to provide inexpensive and speedy redressal to consumers, where a consumer could itself plead its case in the consumer courts (Aggarwal V.K., 2015).<sup>2</sup> Since the law was complex in nature, many con-

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<sup>1</sup> Sheetal Kapoor, *Consumer Affairs and Customer Care* (Galgotia Publishing Company, 2nd edn., 2019).

<sup>2</sup> V.K. Aggarwal, *Consumer Protection: Law & Practice* (Bharat Law House 2015).

sumers started hiring lawyers and there were frequent adjournments which were given by these consumer courts which started delaying the entire adjudicatory process.

Table 1.1: Total number of Cases Disposed by Consumer Forums Since Inception (Update on 5-7-2018)

<i>Sl. No.</i>	<i>Name of Agency</i>	<i>Cases filed since inception</i>	<i>Cases disposed of since inception</i>	<i>Cases Pending</i>	<i>% of total Disposal</i>
1	National Commission	122042	103520	18522	84.82%
2	State Commissions	788463	678124	110339	86.01%
3	District Forums	3903706	3605673	298033	92.37%
	TOTAL	4814211	4387317	426894	91.13%

Source: [www.ncdrc.nic.in](http://www.ncdrc.nic.in)

Analysis of data regarding number of cases disposed by consumer courts shows that on 5<sup>th</sup> July 2018, at National, State and District level, a total number of **48,14,211** cases were registered out of which **43,87,317** cases have been disposed. Thus, there is an astounding figure of **4.3** lakh cases which are still pending in various consumer forums and the disposal rate is 91.13%. Table 1.1 depicts that **1,22,042** cases were registered since inception up to 5<sup>th</sup> July 2018 with the National Commission out of which 84.82% cases were disposed of, while 11% were still pending with the National Commission. In case of State Commission **7,88,463** cases were registered since inception up to July 2018 and 86.01 percent cases were disposed of. A staggering number of **39,03,706** cases were registered throughout the District Consumer Forums in the country and performance of District Consumer Forums was better as 92.37 % cases were disposed of. Justice delayed is justice denied, therefore the huge number of pending cases in the various consumer forums is a major drawback of the CPA, 1986. For petty amounts such as getting compensation in case of defective products, deficiency in service consumers have to wait for years to get justice.

#### **IV. NEED TO IMPROVE: MEDIATION AN INNOVATIVE AND PRACTICAL METHOD**

As mentioned in earlier section, the growing number of pending cases in consumer courts and delays in getting redressal requires some fast track alternatives so that justice reaches to the aggrieved consumers immediately.

There are huge challenges faced by online buyers such as breach of data privacy and security, substandard and duplicate products, phishing, territorial jurisdiction.

In Indian Legal System, appropriate methods of disputes resolution such as, arbitration, conciliation, mediation and Lok Adalat can be used for easy consumer dispute resolution. These methods are less formal, encourage disputants to communicate and participate in the search for solutions, focus better on the root causes of the conflict, salvage relationships and have significant savings in time and cost.<sup>3</sup>

Thus, innovative methods such as alternative dispute resolution (ADR) provides procedural flexibility, saves valuable time and money and avoids the stress of a trial and a three-tier hierarchy structure should be used. ADR is a mechanism of resolution of disputes of conflicting parties without resorting to adjudicatory process. ADR can be one of the best strategies for quicker disposal of disputes to lessen the burden on the consumer forums and to provide suitable mechanism for expeditious resolution of disputes. Mediation, one of the tools to resolve a dispute by direct negotiation by the opposite party has now been brought under the Consumer Protection Bill, 2019.

Mahatma Gandhi also described his experience at amicable dispute resolution as an exercise in uniting parties riven asunder in his autobiography which is the essence of mediation<sup>4</sup>. Mediation is a negotiation process in which a neutral third party assists the disputing parties in resolving their disputes. A Mediator uses special negotiation and communication techniques to help the parties to come to a settlement. The parties can appoint a Mediator with their mutual consent or a mediator can be appointed by the Court in a pending litigation. Mediation always leaves the decision-making power with the parties. A Mediator does not decide what is fair or right, does not apportion blame, nor renders any opinion on the merits or chances of success if the case is litigated. Rather, a mediator acts as a catalyst to bring the two disputing parties together by defining issues and limiting obstacles to communication and settlement. The Mediation Process consists of:

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<sup>3</sup> Omkar Anuroop and Krishnamurthy Kritika, *The Art of Negotiation and Mediation* (LexisNexis 2015).

<sup>4</sup> [www.delhimediationcentre.gov.in](http://www.delhimediationcentre.gov.in).



1. Structured Process
2. Neutral third party
3. Facilitates resolution of disputes
4. Mutually acceptable to parties
5. Specified negotiation and communication techniques

## V. NEED FOR MEDIATION IN CONSUMER CASES

The concept of mediation is ancient and deep rooted in our country. In olden days disputes used to be resolved in a panchayat at the community level. Panch used to be called Panch Parmeshwar i.e. were equated to God. Our judicial system is one of the best in the world and is highly respected, but there is lot of criticism on account of long delays in the resolution of disputes in civil court and consumer forums. Many times, consumers are wary of approaching the consumer forums or civil courts for a decision of their dispute.

Mediation in comparison to a lawsuit is quick, private, fair and inexpensive. It is a different paradigm and path from litigation which focuses on the past, establishing blame and liability and a win-lose results. In mediation the emphasis is on the future cooperation and direct communication with objective of sustainable solutions with win-win situation for all parties. It is a voluntary and flexible process where the parties participate in decision-making process and are only bound when they enter into a written agreement. It works in disputes before they are taken to court, to disputes pending in courts and even after a Court verdict has been given. It is a strong tool in the hands of the parties to devise solutions which could be more effective than judicial verdict.

In Western countries the response to mediation is very successful. Courts of law have set up Court Annexed Mediation Programmes. Lawyers have found that mediation is a new skill, which aids their clients. Clients have realised that mediation is a cost and time effective process and prefer lawyers who can suggest mediation before going to court. In USA ADR has been practiced for about 30 years and 90% cases settled through ADR in USA whereas in UK, Australia and other countries ADR has been practiced for about 20 years with huge success rate (Panchu Sriram 2015).<sup>5</sup>

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<sup>5</sup> Panchu Sriram, *Mediation Practice and Law: The Path to Successful Dispute Resolution* (LexisNexis 2015).

In India, after the incorporation of Sec 89 in Code of Civil Procedure, 1908, mediation in the legal way was first introduced and became operative w.e.f. 1-7-2002. Before that the utility and application of mediation in dispute resolution was not known. In 2002, mediation, was stated to be a new concept for the justice delivery system and for the resolution of disputes outside the traditional court mechanism. When Section 89 was introduced, concept of mediation was not known and trained mediators were neither available nor mediation centres were established in the judicial districts (Karachiwala Kassam Firdosh, 2010).<sup>6</sup> In *Afcons Infrastructure Ltd.* case also it was argued that if one party agrees to go for mediation then the court can consider it and this method of resolving dispute can be adopted<sup>7</sup>.

The process of adjudication of consumer disputes is adversarial in nature and is characterised with numerous and complex rules of form and procedures. Filing a consumer complaint comprises of many rules and procedures where the process of the issuance of legal notice to the opposite party and adjudication through a three-tier consumer courts is very time consuming. Many times, consumers face the situation of David and Goliath where the consumers have to fight against big players such as MNC's who engage a battery of lawyers and are ready to fight the case for years.

The mediator through its expertise, thinking power and maturity generates solutions for the parties to resolve disputes amicably. A good mediator possesses active listening, communication skills, option generation, reframing the case by avoiding harsh language used by one party, transposing, reality testing and maintain confidentiality. Delhi Mediation Project is a unique model. It is a pilot project and is running under the guidance of the Supreme Court of India since 2005. The first batch of Senior Additional District Judges were imparted Mediation Training of 40 hours duration. A permanent Mediation Centre was established at Tis Hazari court complex (Central Hall, 3rd Floor, Room No. 325) in October, 2005 and other mediation centre are working at Karkardooma Court Complex, Rohini, Dwarka, Saket and Patiala House Courts Complex.

Some other innovative ADR methods available to consumers before going for judicial mediation or going to consumer courts include National Consumer Helpline (NCH) and Online Consumer Mediation Centre at NLU established by Government of India. NCH with its toll-free number

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<sup>6</sup> Firdosh S. Kassam (Karachiwala), *Conflict Resolution through Mediation* (Snow White Publications Pvt. Ltd. 2010).

<sup>7</sup> *Afcons Infrastructure Ltd. v. Cherian Varkey Construction Co. (P) Ltd.*, (2010) 8 SCC 24.

1800-11-4000 or 14404 provides advice, information and guidance to empower consumers and persuade businesses to reorient their policy and management systems to address consumer concerns and grievances adopting global standards. The NCH Project recognizes the need of consumers for a Telephone Helpline to deal with multitude of problems arising in their day-to-day dealings with business and service providers. A consumer can call NCH to seek information, advice or guidance for its queries and complaints<sup>8</sup>.

The Online Consumer Mediation Centre, established at the National Law School of India University, Bengaluru under the aegis of Ministry of Consumer Affairs, Government of India aims to provide for a state-of-the-art infrastructure for resolving consumer disputes both through physical as well as online mediation through its platform. The center provides innovative technology for consumers and organisations to manage and resolve conflicts and to propel online mediation as a first choice to resolving consumer disputes<sup>9</sup>.

## VI. MEDIATION AS THE NEW TOOL (THE CONSUMER PROTECTION BILL, 2019)

In *SpiceJet Ltd. v. Ranju Aery*<sup>10</sup> the consumer had to fight its case from the district forum to State Commission to National Commission and then finally to the Supreme Court regarding the contract of service entered through internet and the cause of action of the complaint. In order to accelerate the process of adjudication, The Consumer Protection Bill, 2019 envisages establishment of Central Consumer Protection Authority, mediation, product liability, and faster redressal by the consumer commissions. Since the adjudication process in consumer courts is slow, setting up of mediation centres at District, State and National Commissions annexed to the consumer courts can play an important role in delivering justice.

Clause 74-80 added in the New Consumer Protection Bill, 2019 contain provisions for “Mediation” as an Alternate Dispute Resolution (ADR) mechanism. It aims to provide legislative basis to resolution of consumer disputes through mediation thus, making the process less cumbersome, simple and

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<sup>8</sup> <<http://www.nationalconsumerhelpline.in/>>.

<sup>9</sup> <<https://www.nls.ac.in/>>.

<sup>10</sup> SLP(C) No. 25206 of 2017, decided on 4-8-2017 (SC) available at <<https://www.dailypioneer.com/2017/page1/online-buyers-can-sue-sellers-anywhere-sc.html>>

quicker. The mediation centres would work under the aegis of the Consumer Commissions and the State Government and the Central Government would decide the composition of the mediation cell.

Sec 74 of the New Consumer Protection law mentions that the State Government would establish a consumer mediation cell which would be attached to the consumer courts and each of the regional benches. Every consumer mediation cell would submit a quarterly report to the District Commission, State Commission or the National Commission to which it would be attached. Thus, every consumer mediation cell would maintain:

- (a) a list of empanelled mediators;
- (b) a list of cases handled by the cell;
- (c) record of proceeding; and
- (d) any other information as may be specified by regulations.

The tenure of the panel of mediators would be valid for a period of five years, and the empanelled mediators shall be eligible to be considered for re-empanelment for another term, subject to such conditions as may be specified by regulations. The mediation shall be held in the consumer mediation cell attached to the various consumer Courts (Clause 75).

Clause 76 provides that it shall be the duty of the mediators to disclose certain facts which may likely to give rise to a justifiable doubt as to his independence or

Impartiality whereas Clause 78 provides for replacement of a mediator by the consumer courts on the information furnished by the mediator or on the information received from any other person including parties to the complaint and after hearing the mediator. Further procedure of mediation is discussed in Clause 79 and Clause 80 discusses provisions relating to settlement through mediation and the role of mediator when an agreement is reached between the parties with respect to all of the issues involved in the consumer dispute or with respect to only some of the issues, and in the event where no agreement is reached between the parties.

## VII. CONCLUSION

Growing backlog and delay in resolution of consumer disputes can erode the consumers trust in the legal system where the claims are of small value. Mediation can play an important role in consumer dispute resolution,

especially in cases which are pending for more than five years in the consumer courts. In comparison to a complaint filed in a consumer court, mediation can take away a lot of burden from the consumer courts and can be quick, private, fair and inexpensive. Thus, increasing and strengthening consensual alternatives through mediation would help in reducing backlog and improve the chances for the resolution of consumer disputes, by providing justice in time and hence can play a vital role in the economic growth of India.

# PROTECTING THE DIGITAL CONSUMERS: CHALLENGES AND POSSIBLE SOLUTION

—*George Cheriyan and Simi T.B.\**

## I. INTRODUCTION

Innovation and technology have taken over the future of marketing and are becoming more global in dimension. Consumers across the globe are increasingly relying on the technology to buy and sell products and services. Such rapidly changing, increasingly complex and information intensive markets for goods and services do pose new challenges to regulators and consumers. While such challenges are common across various countries, it is worst in a country like India where the consumer market largely comprises of a huge middle class, relatively large affluent class and equally disadvantaged class.

At present, India is one of the largest and fastest growing markets for digital consumers, with 560 million internet subscribers,<sup>1</sup> second only to China. Out of 560.01 million internet subscribers, wired internet subscribers are 21.25 million and wireless internet subscribers are 537.92 million. The country has 366 million internet subscribers in urban locations and 194 million in rural areas. Out of total internet subscribers, 96.06 percent subscribers are using mobile device for access of internet service.<sup>2</sup>

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<sup>1</sup> Telecom Regulatory Authority of India, Press Release No. 40/2019.

<sup>2</sup> The Indian Telecom Services Performance Indicators: July–September 2018, Telecom Regulatory Authority of India (New Delhi, 2019) <<https://main.trai.gov.in/sites/default/files/PIR08012019.pdf>> accessed 9 September 2019.

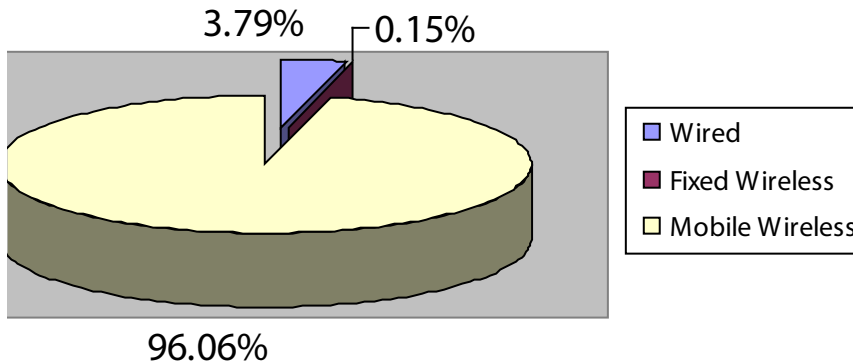


Fig 1: Composition of Internet Subscription; Source: TRAI

Improved availability of bandwidth than a few years before, cheaper data plans, easy availability of low cost mobiles coupled with increasing influence of the peer group seem to have rapidly bridged the digital gap between urban and rural India.

## II. DIGITAL CONSUMERS IN E-COMMERCE

The increase in usage of internet has significantly contributed to the rise in electronic commerce (e-commerce) market. As per the Economic Survey 2017-18,<sup>3</sup> the e-commerce market in India is estimated at USD 33 billion, with a 19.1 percent growth rate in 2016-17. As per the National Association of Software and Services Companies (NASSCOM) Strategic Review 2018, the Indian e-commerce market reached USD 38.5 billion, growing at a rate of about 17 percent in the financial year 2018-19. In 2018, the sale of physical goods via digital channels in India amounted to USD 22 billion in revenues.<sup>4</sup>

The above numbers are certainly to swell in the coming years and more consumers would rely on the internet either to make or to guide their purchases. Even if the consumers do not make a digital purchase, online information's can significantly influence a consumer's purchasing decisions. Thus the internet has facilitated easy access to various goods and services that

<sup>3</sup> "E-Commerce Market growing at a rate of about 17% in 2018-19" (Press Information Bureau Government of India Ministry of Commerce & Industry, 17 December 2018) <<https://pib.gov.in/newsite/PrintRelease.aspx?relid=186472>> accessed 9 September 2019.

<sup>4</sup> "Retail E-Commerce Sales in BRIC Countries in from 2016 to 2023" (Statista, 1 April 2019) <[www.statista.com/statistics/255268/bric-b2c-e-commerce-sales](http://www.statista.com/statistics/255268/bric-b2c-e-commerce-sales)> accessed 9 September 2019.

were otherwise not available locally. Affordability, convenience, availability and wider choice are therefore the prime reason for wider acceptance of online purchase. Consumers are now flooded with various goods online, with freedom to choose.

### **A. Concerns**

While online consumer marketplace grows at a rapid rate and offers considerable potential economic and consumer benefits, disruptive technologies continue to evolve. Majority of the consumers are sceptical about timely delivery of goods purchased, after sales services, impartial redressal mechanisms, counterfeit products and the reliability about the description of goods offered. Likewise, lack of trust between consumer and supplier or retailer is a bigger issue online than it is offline.

Online identity theft and phishing is also a growing concern among consumers. Stealing and using a person's banking information and using it to purchase goods or transfer money to another bank account is becoming a common norm. Online medium easily allow perpetrators to impersonate lawful business activities far more convincingly and trap potential victims. Often, even before the victims realise being cheated the perpetrators get away from detection by maintaining anonymity. They become untraceable as they keep relocating when detected. Beside e-commerce have no defined borders, so cooperation and coordination at international level, particularly when there are hardly any domestic legislations for protection often becomes difficult.

Thus in this digital age, authorities around the world are concerned with new challenges in consumer protection. The government therefore have a significant role to update, adapt and maintain a stronger consumer protection framework that is efficient and reactive to the interconnected nature of e-commerce. This would aid the growth of a digital economy and protect consumers' digital rights, like in most developed countries wherein their governments have enacted laws that are facilitative of such interactions.

### **B. Legal System**

Law regulating e-commerce in India is yet to be evolved. At present there is no law to protect consumers if they lose money during online purchases. Regardless of the lack of any such legal framework to regulate such transactions, quite a remarkable number of marketing interactions happens



daily through online. Even the absence of basic privacy and security laws pertaining to digital payments in India therefore puts the onus on consumers who use such services.

Various other legislations, like the Legal Metrology Act 2009, the Packaged and Commodities Rules 2011, the Indian Contract Act 1872, Information Technology Act 2000, the Food Safety and Standards Act 2006 and Drugs and Cosmetics Act 1940 all in their own way help a bit in protecting consumers from online purchases but is never a complete solution. These legislations fall short to address the intricacies and technicalities involved in digital transactions.

Many hopes are therefore placed on the proposed Consumer Protection Bill 2018 which defines the term e-commerce as buying or selling of goods or services including digital products over digital or electronic network. This draft legislation gives central government the power to take required measures to prevent unfair trade practices in e-commerce.

### **III. DIGITAL CONSUMERS IN FINANCIAL SERVICES**

It's not just the e-commerce; the digital revolution radically changed the way the customers and financial institutions interact. An increasing number of financial entities and technological firms are constantly together testing out various technological and financial solutions to make their business far more innovative, reachable and acceptable. To a considerable extent such revolutionary changes were successful in attracting digital financial consumers as it has now become a norm among people, especially in urban areas, to access financial services with the aid of technology.

Digital in financial services refers to use of an electronic device or system to access financial services such as storing funds, making and receiving payments, applying for credit or for insurance. Nowadays a broad range of financial services are accessed and delivered to customers through digital channels, including payments, credits, savings, remittances and insurance. Growth of internet, availability of low-cost data plans; customer convenience and time saving are the prime factors for such wide acceptance. Today most of the digital consumers pay their utility bills, transfer cash and access their bank statements readily using internet.

Digital payments are not one instrument. It is an umbrella term applied to a range of different instruments used in different ways. Such payments are initiated by the person by way of an instruction, authorisation or by

ordering his bank to debit or credit an account through electronic means. Over the past two years, digital payment transactions have registered tremendous growth in India. According to Reserve Bank of India, the number of digital payment transactions in the year 2015-16 was 292.8 crores. This has increased to 921.7 crores in 2017-18. Consumer behaviour has been driving growth of digital payment systems as more and more consumers are embracing mobile technology.

New payment modes like Bharat Interface for Money-Unified Payments Interface (BHIM-UPI), Aadhaar enabled Payment System (AePS) and National Electronic Toll Collection (NETC) have transformed digital payment ecosystem by increasing Person to Person (P2P) as well as Person to Merchant (P2M) payments. At the same time existing payment modes such as debit cards, credit cards, Immediate Payment Service (IMPS) and Pre-Paid Instruments (PPI) have registered substantial growth. With exponential growth, new payment modes have also emerged as a convenient alternative to existing payment modes like debit cards, credit cards, IMPS and PPI.<sup>5</sup> While such a growth in digital financial services has ensured the inclusion of millions of more consumers, rapid development of technology and constant changes have forced some of the consumers to stay out or get more vulnerable.

### **A. Concerns**

Till date, majority of the Indian rural population are unfamiliar with formal financial services, let alone technology based financial products and services. Their poor levels of literacy, including financial literacy act as a main barrier. They hardly understand even a simple text message on their phone and often perceive financial service and products complex and difficult to understand. Besides those who understand and show willingness to do digital transactions are often marred with poor network coverage, insufficient infrastructures and other new types of risks including denial of service attacks, fraudulent money transfers, identity theft and data breaches. Therefore, most of the customers do not feel confident to conduct transactions safely and efficiently, when needed.

While government has introduced Jan Dhan Yojana, Bhamashah Yojana etc. to enhance financial inclusion of citizens, more efforts should be taken

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<sup>5</sup> “Digital Transactions Registered Tremendous Growth” (Press Information Bureau, Government of India, Ministry of Electronics & IT, 9 November 2018) <<http://pib.nic.in/newsite/PrintRelease.aspx?relid=184668>> accessed 7 September 2019.

to enhance the capacity of financial consumers, particularly women towards financial literacy and consumer awareness. At present the approach taken by financial sector in India is largely based on the doctrine of *caveat emptor* (i.e. 'let the buyer beware'). Other than providing protection from fraud and provisions to ensure full disclosure, consumers are generally left on their own. Thus the vulnerability of consumers coupled with inadequate financial literacy is hovering over the financial regulation space in India. So the situation gets even worst when the financial services are carried out with the aid of technology. According to the Reserve Bank of India (RBI), during the year 2015-16, 2016-17, 2017-18, the number of registered cases of fraud involving ATM/debit cards, credit cards and internet banking stood at 1,191, 1,372 and 2,059 respectively.

Moreover, the financial system in India has many regulators, each having a separate mandate. Policy related frictions therefore keep arising from the diversity of different legislations and the overlapping of the regulatory jurisdictions. Such confusions coupled with absence of timely and accessible complaint and dispute resolution mechanisms shackle the very trust of the consumers. The usual 'buyer beware' approach is not adequate in this sector and the regulators must place the burden upon financial firms of doing more in the pursuit of consumer protection.

Likewise, though mobile internet speed and connectivity issues remain unresolved in most part of the country. United States data speed tester Ookla has ranked India 121<sup>st</sup>, almost at the bottom in its list of 138 nations, on overall mobile internet speeds. The data speed is much lower than most of our neighbours, including China, Sri Lanka and Pakistan. With a rank of 108 at the beginning of 2019, it has fallen to 121, while China is at the 51, Sri Lanka at 63 and Pakistan at 110.

## **B. Legal system**

There are over sixty plus legislations and multiple rules and regulations that govern the financial sector.<sup>6</sup> However, many of them are outdated and

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<sup>6</sup> Some of the legislations are: The Chit Funds Act, 1982; National Housing Bank Act, 1987, Banking Regulation Act, 1949, Deposit Insurance and Credit Guarantee Corporation Act, 1961, Reserve Bank of India Act, 1934, Securities and Exchange Board of India Act, 1992, Recovery of Debts Due to Banks and Financial Institutions Act, 1993, Foreign Exchange Management Act, 1999, Banking Ombudsman Scheme, 2006 (governs resolution of consumer disputes); Insurance Act, 1938, The Public Liability Insurance Act, 1991, The Insurance Regulatory and Development Authority Act, 1999, Consumer Protection Act, 1986, Competition Act, 2002, etc.

date back several decades, when the financial landscape was very different from that seen today. For instance, the Reserve Bank of India (RBI) Act was enacted in early 1930s while the Insurance Act enacted in the year 1938. While these regulations and laws are continuously evolving, more needs to be done to protect digital consumers. The outdated Consumer Protection Act of 1986 serves little or no purpose and it urgently needs to be replaced with the proposed Consumer Protection Bill 2018. A stronger consumer protection framework in this sector is vital to build the consumers trust and confidence.

#### IV. CONCLUSION AND WAY FORWARD

It is a fact that there is an amount of risk involved while using internet for purchasing goods and doing financial transactions. Only a stronger consumer protection framework in line with the recommendations of various national experts and international bodies can ensure security and reliability. Towards achieving this, the best and successful practices from other countries can become a guiding light. Along with, there is also a need to boost international coordination in e-commerce to avoid unilateral actions as that could stifle trade and lead to uncompetitive practices. Systems like online dispute resolution will certainly be a good initiative to address cross border e-commerce transactions.

Digital technologies and market evolutions are often expeditious and random; any rules framed to protect the consumers therefore need to be flexible and adaptive enough to the changing scenario and its objectives. Besides, effective coordination among various agencies is vital for stricter monitoring and enforcement of consumer protection provisions related to digital crimes that are currently scattered across various legislations. The consumer protection of digital value chain cannot be regulated alone by any single agencies. Various agencies need to intervene, such as the competition authorities, financial regulators, the network security agencies and even agencies like the telecom, but hardly this happens.

Likewise, other than strengthening the law relating to digital crimes, consumer education and financial literacy need to be twined with consumer protection, as consumers themselves, are the best guardians of the consumer's rights and interest. Adequate importance should be given to empower consumers to make the right choices for themselves, in particular by ensuring that they have the right information and the possibility to switch or refund when needed. Financial inclusion schemes become oblivious if

consumers remain poorly informed on how to encounter a problem while using digital services. They need to be aware of various grievances redressal mechanisms available to them. Such an increase in awareness would act as bridge towards building consumer trust in the services, thereby prompting them to use digital services. Above all enact the draft Consumer Protection Bill 2018.

However, government alone cannot adequately address several of these challenges whether from the perspective of the market or that of the consumer. There is a need, for all stakeholders – the government, regulators, business institutions, voluntary consumer organisations and elected representatives to work together to gain consumer trust and confidence in this digital world.

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