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Before machines consume the consumers

High-Level Takeaways from the ARTSY Project

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Abstract

Business is using artificial intelligence in essentially all sectors of the economy: machine learning is employed to generate knowledge out of big (consumer) data, to optimize processes and to undertake new, previously impossible tasks. This might come with benefits for the consumers and the society, but definitely poses numerous challenges. In this short note, we provide an overview of challenges for EU consumer law and policy stemming from the business's use of AI, and sketch a plan for action. We argue that AI will need to be tackled case-by-case, bottom-up, though with the big picture in mind. It needs to be tackled soon, but we do need to take our time to reconsider the assumptions that have been challenged, and not rush to political conclusions. Moreover, we argue that the role of law is not just to minimize the risks, but also to enable developments in consumer-empowering AI tools. These tools, however, will not be given to us by business. Civil society must take action and fight for them.

We cluster the challenges and takeaways by the type of actors that are affected by the business's use of AI. **Consumers** face the risk of undue influence on their behavior (by targeted personalized commercial practices), exclusion from access to goods and services (ad delivery & price discrimination) and lower quality of information and services in the interaction with artificial agents. **Regulators** need to revise their governance toolbox, taking into account the specificity of AI's operations (stealth infringement, wide-spread-by-minor damage, automation of reasoning). Also, regulation needs to strike a correct balance between specific cases and the bigger picture, and between commanding and enabling. In **EU consumer law**, the concepts of unfair commercial practices and unfair contractual terms should be revisited, to take into account the reality of business using AI. In addition, we should consider the usefulness of adopting special data protection rules to supplement the GDPR, by stating what purposes of data processing are lawful in what markets. **Civil society** should strive to seize the opportunities of AI in the medium-term, making the best use of the existing legal instruments (UCPD, UCTD, GDPR) in the short-term, and lobby for societal and legal change in the long-term. Finally, **academia**, in particular legal scholars, must re-consider their role in the debate on AI governance: they should ground their research in empirical findings, acknowledge the limitations of sectoral knowledge and remedy such limitations by engaging in an interdisciplinary and multi-stakeholder dialogue. We argue that the competitive advantage of scholars goes beyond offering concrete policy recommendations. Instead, it concerns a critical reflection on the ways in which the mass deployment of AI challenges the basic assumptions and presuppositions of the existing legal and regulatory theory and practice.

Keywords

Consumer law and policy, artificial intelligence, machine learning, empowerment, civil society

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Introduction¹

We are surrounded by articles, books and political strategies telling us that we are surrounded by artificial intelligence, even though we may not realize it. These texts are right. Indeed, both the private and public sector are employing tools and systems fueled by big data and powered by machine learning, to generate new knowledge and act upon it.² They do so in order to automate and optimize certain processes, and to undertake new types of tasks, which were previously impossible. In recent years, businesses have experimented with AI in essentially all the sectors of the economy, as they are naturally inclined towards optimization and profit-maximization. This change, just as any socio-technological change, comes with benefits and challenges. Law and technology scholars agree that regulation of new technologies should mitigate the risks without impeding the gains. Since we assume that business will quite effectively communicate the *benefits* of its use of AI for the consumers and the society through lobbying and PR actions, we have decided to devote our research efforts to mapping the *challenges*.³

The same articles, books and political strategies, however, will often tell you that the danger is imminent, and that we must regulate quickly. They will usually tell you how exactly we should regulate. That is where these texts should be read critically and with a healthy dose of skepticism. If we are facing a revolutionary paradigm shift – as we most probably are – the desired response might need to be slightly more nuanced than a quickly pushed-through political compromise and a new set of EU directives. Certain concepts and assumptions underlying our regulatory practice and theory will need to be questioned and rethought. This is not to say that there is no need for intensified effort and quick action. On the contrary. But that we should act fast does not mean we can afford to be sloppy. It is the role of academia to focus on these tasks: critical reflection, breaking the boxes and escaping the path-dependence.

It has been the ambition of the ARTSY sprint-research project to map the challenges to EU consumer law and policy stemming from the business's use of AI. The project has been conducted at the European University Institute during the academic year 2017-2018. To do so, we have established an AI observatory and mapped the business practice and the scholarly debates. This short memo summarizes the most important outcomes and takeaways of this ARTSY-project. The results are presented in more detail in the report "*Consumer Law and Artificial Intelligence Challenges to the EU Consumer Law and Policy Stemming from the Business's Use of Artificial Intelligence*", which is available in open access.

We cluster the challenges and suggestions for action by the actors involved: consumers, regulators, civil society, EU consumer law, and academia. We finish with some brief observations about the intersection of regulation and innovation. Yet we start with three general takeaways for everyone.

¹ The authors would like to thank the participants of the workshop Before Machines Consume the Consumers. Consumer Law and Policy in the Algorithmic Age, organized on 28-29 June 2018 at the European University Institute in Florence, for their feedback, suggestions and comments, which made this report much better thought-through. In particular, they would like to thank Professor Urs Gasser for his invaluable support at all stages of the project, and express their gratitude towards the Berkman Klein Center for Internet and Society at Harvard University, for funding which made the research leading to this report possible.

² This, by the way, might be the most accurate definition of "artificial intelligence" for the purposes of discussion of the "regulation of AI" – "a socio-technological practice where an entity, private or public, uses machine learning tools to generate new knowledge out of large amounts of data, and/or act upon that knowledge, in order to automate and optimize certain process, as well as undertake new, previously impossible, tasks".

³ See the full report: Consumer Law and Artificial Intelligence Challenges to the EU Consumer Law and Policy Stemming from the Business's Use of Artificial Intelligence, available at: <https://artsy.eui.eu/final-reports/>

High-level takeaways: Get back on the ground!

1/ Tackle AI bottom-up, case by case

Let me take a glimpse at the Human Intelligence Act... Oh, wait, we don't have one

There will be **no top-down, one-size-fits-all “solution” to AI**. Artificial Intelligence is not “one thing” posing “one problem”. Therefore it needs to be **tackled** (both in research and regulation) **case-by-case**, though with **the Big Picture in mind**. Challenges posed by AI-powered targeted commercial practices are different from those posed by self-driving cars or healthcare applications. Responses will differ. In some cases *ex ante* regulation might be useful, in others not. There is no *Car Act* or *Car Agency* dealing with all the problems caused by cars. Instead, we have traffic laws, emission standards, driver and taxi permits. In a similar way, there will be no *AI Act* or *AI Agency*. **Top-down regulation of all problems posed by AI in all spheres is a NO-GO**. This said, various communities – academia and policymakers, consumer lawyers and IT lawyers, lawyers in general and engineers etc. – must obviously talk to each other. Insights from one sphere can certainly be inspiring, if not directly applicable, in others. We should get concrete, not create new silos. **Start low and go high, not the other way round**.

2/ Festina lente: make haste slowly

One does not react to a Revolution by adopting an EU Directive

‘It is already **too late to get started** [with research on and regulation of AI]’, some wise people [claim](#). Indeed, AI-based systems are being developed and used essentially everywhere, without deep normative considerations in mind. In the last two years, numerous national and transnational AI strategies have been issued, conferences conveyed, papers published and High Level groups, committees and partnerships have been formed. AI has become fashionable. However, acting *too fast*, rushing to conclusions and regulatory proposals, risks **overlooking something critical**, putting in place regulations with **unintended negative consequences**, and as a result **impeding the benefits without preventing the harms**. One does not respond to a **Revolution** with an EU Directive. Let us act, but let us act wisely. *Sat celeriter fieri quidquid fiat satis bene* – **That which has been done well has been done quickly enough**.

3/ Enable the good, do not just fight the bad

Artificial intelligence is not just a challenge to be tackled, but also an opportunity to be seized. Admittedly, when AI remains exclusively in the hands of the state and businesses, it tends to increase the power imbalance between the big players and the people. If society benefits, it is usually just a side-effect of the real purpose. AI-powered tools enable corporations to **predict and influence consumer behavior** and **include or exclude** certain groups from **access to goods and services**. Through **targeted and personalized** commercial practices they significantly affect the functioning of the market. These risks need to be controlled, among others by law. However, this cannot be done by the state alone. And here AI shows its bright face. It can [empower](#) the civil society and the consumers, help them **exercise their rights** and **undertake civil control**. Hence, the role for law is not just to protect, but also to **enable** the creation and deployment of AI-powered consumer and civil **tools** (e.g. [CLAUDETTE](#)), through funding, social campaigns and regulation that forces corporations to allow the use of civil tech by activists. **If we are proactive here, AI will render benefits**.

Challenges and plan for action

The ambition of the ARTSY project has been to map the challenges to consumer law and policy stemming from the businesses use of AI. So, what are these challenges?

1. Consumers

Challenges for consumers stemming from the use of AI by businesses are essentially those associated with business's ability to **generate operable knowledge** (direct or inferred) out of enormous amounts of data, act upon that knowledge quickly due to **automation** of various **processes**, and **target** individual consumers with **personalized commercial practices**. This results in a growing **information asymmetry** and **power imbalance**, loss of consumer **privacy**, potential for **limited access** to goods and services, **undue influence on consumer behavior**, and decrease in consumers' **autonomy**. A taxonomy of challenges will differ depending on the perspective one takes. **Deontological approaches** would state that it is simply a problem that "business knows so much, machines are taking decisions about humans and consumers must talk to bots, regardless of the results". The **consequentialist** perspective would deem problematic only the uses of data-driven AI having negative consequences for consumers: unfair automated decisions, misuse of knowledge to exclude certain consumers or coerce them into purchasing, lower quality of information etc. Both approaches may be appropriate, depending on the concerns being addressed, but one should bear in mind that these are two different types of normative considerations. Below we study three clusters of challenges in more detail.

1.1. Undue influence on consumer behavior and loss of agency

There is a thin line between showing me what I need, what I think I need, and what I fear I need

With systems fueled by big data and powered by machine learning, business now understands consumer preferences and behavior better than consumers themselves. The ability to display personalized commercial practices like ads, offers and suggestions ("you might be interested in this product", "others like you also bought this services") might sometimes be good for consumers (if one must see ads, why not the interesting ones?). Yet it also carries a risk of **undue influence**. With highly personalized advertising, businesses might coerce consumers into commercial decisions they would not have taken without the circumstance of "vulnerability". *Everyone* is vulnerable every now and then. A person awake at 3 a.m. is more prone to buy "magic" sleeping pills. A person diagnosed with an obesity-related disease is more prone to buy dietary supplements aimed at reducing the body mass. A person who feels lonely is more prone to pay for a dating service that promises a "perfect match". With AI and big data, business has the means to know when someone is particularly vulnerable. Consequently, it can show the "right" content to the right person at the right moment. That is one side of the coin, when the machines get good at showing harmful content. The other side of the coin is of course that not all personalized content is necessarily bad. There is also a potential for reducing search costs for consumers and showing them exactly what they need. However, there is also a risk of a growing **techno-dependency**. If the machines get better and better at suggesting, we delegate more and more choice to them. At what point are we no longer capable of choosing for ourselves? There is a growing trade-off between convenience and freedom. How to best balance these two sides?

1.2. Inclusion/exclusion in access to goods and services

Two consumers walk into a bar, but one needs to pay more for her coffee

One of the recurring themes in discussions about AI is that of **discrimination**. The dream of objective and fair decisions taken by machines that are free from emotions and prejudice, has quickly run into the reality of **data bias**. Discrimination in ad delivery, based on race and gender, has been documented. One study showed for example that ads of high-paid-jobs tend to be displayed mostly to white males. Even

corporations acting in good faith and without any intention to discriminate, might end up doing so, unless their systems are designed in a way to minimize the risk. However, there is an even darker side. Those who want to *exclude* certain groups of consumers from access to their goods and services, might now do so by manipulating the ads and the prices to a degree previously impossible. Price differentiation is namely another type of “discrimination”. With big data and AI, corporations can precisely assess one’s willingness to pay for a given product. Arguments have been raised for doing so to increase the efficiency. But can economic and non-economic motivations be fully separated here? What if a company, say an airline, wishes to exclude members of a particular ethnic or religious group from its services, by selectively raising its prices? Because it believes that such an action will increase the value some other consumers attach to it, and ultimately increase the gains? With AI, big data and personalized commercial practices, corporations can know what characteristics each consumer has, what their willingness is to pay, and display them a price higher than they can afford. And even if business does not do that and only shows each consumer the highest price they are willing to pay: do we want to live in such a world? Where we both walk into the same supermarket, but the price you see is higher? Where soon there will be no choice and no market? This is now already happening online. And, with advances in face recognition and emotion recognition technologies, it might soon happen offline as well.

1.3. Quality of goods, services and information

Do you prefer a human lawyer you can’t afford, or a machine with a 30% chance of being wrong?

It is cheaper to employ a bot than a human. Machines do not demand salaries, they don’t sleep, work 24/7. They don’t get sick. Don’t need holidays. Hence, many companies use them for communications with consumers, online and on the phone. Moreover, machines can perform certain tasks much faster than humans, and arguably with a higher accuracy. For these reasons, more and more “consulting” services, in financial advice, legal and healthcare sectors, are also being automated by AI. The promised benefits are clear: cheaper, faster and more accurate information and service. Perfect. However, just as humans, machines do err. They are not as perfect as we hope they would be. The ways of mitigating the risks, however, are different. For regulated professions, we have procedures. For employees in call centers, we have procedures. Generally, we have certain, implicit or explicit, knowledge on how to train humans to minimize certain risks. What are the procedures for the machines? What should they be? Should consumers have a right to talk to a human? And what if business, aware of consumer preferences and linking these considerations to those above, offers something of lower quality for a higher price? Good wine for those with sophisticated taste, worse for the rest? While the increased quality of automation is promising, we see the danger of a lowered quality of personalized offers and other commercial practices. And, more immediately, just low quality coming from poorly implemented systems.

2. Regulators

The main challenge for the regulators is that the subjects (actors to be regulated) have changed. Existing laws have been created over the ages – in substance, form and accompanying institutions – to **guide the behavior of humans**. Certain assumptions run deep. When there is something we do not want humans to do, we impose a sanction. The higher the sanction and the probability of enforcement, the lower the chance they will still do it (we assume). When we publish laws, humans will somehow learn about them – through media, culture, maybe by asking lawyers. Many of these assumptions are now being challenged by behavioral and cognitive sciences, even if they only involve humans. But when it comes to machines, they do not hold at all. Machines do what they are programmed to do. Making sure that your employee does not do something illegal – through training, corporate rules etc. – is different from making sure that your machine does not do so. And therefore the law that requires this needs to be different as well, if it is to be effective. How? Well, this is where the challenges to regulators come into play.

2.1. Expertise: technical and normative

So what is this, um... artisan intelligence again?

The current regulators often lack expertise and knowledge both on the technical level (the level of means) and on the legitimacy level (the level of goals). This, clearly, is not a problem specific only to AI. So maybe, while tackling the AI, we can develop some more universal good practices. But if that is too big of a task, we definitely need to develop them for AI itself. How do we make the AI-powered systems law-abiding by design? How do we oversee them? Engineers know what can be done, and regulators must learn. What is the society we want to live in? Do people want more or less personalization, more convenience or rather privacy and freedom? That is something only the people themselves know. Maybe regulators should ask them. By posing meaningful political questions. Or by engaging the civil society. Whatever the channel, it seems wrong to assume that we know what is best for the people without consulting them.

2.2. The toolbox is outdated

“I don’t know why the computer colluded, we made it watch the compliance video!”

The toolbox lawyers and regulators have in mind has been created for the world where potentially unlawful/harmful behavior is undertaken by humans. Now we need one for humans who design and use machines, machines to whom a significant amount of decision power is delegated. Machines that operate online. With a risk of the “stealth” infringement (how do we even see that there is discrimination in ad delivery? How do we know that consumers are shown aggressive ads, if they are only visible to them on their smart devices?). With a risk of minor-but-widespread infringement (if everyone takes some damage that is too small to bother, no one will act, even if it can be enormous on the societal level). Moreover, if artificial agents are to behave lawfully (i.e. not process sensitive categories of data, not show ads in an aggressive manner), some normative component needs to be incorporated into their code. That means that certain legal requirements need to be formalized. By whom? How? This should be done case-by-case (spoiler alert: the tools for preventing aggressive commercial practices will not be the same as those for ensuring high quality of automated legal advice). It should ultimately lead the regulators to re-think the very toolbox they employ in the regulation of behavior: that of humans and that of machines.

2.3. Right balance between high and low, commanding and enabling

The golden balance is not in the middle, but where it actually is

There are two extremes we should avoid. On the one hand, we should not try to “regulate *the* AI” top-down, through one instrument, according to a uniform set of principles. We do not act this way with humans, because it would not work. Why would it work with machines? After all, machines increasingly perform tasks that are similarly complex and diverse as those carried out by humans. Hence, there is a need to ponder regulation case by case, risk by risk, use by use. On the other hand, we should not create hundreds of silos, communities that do not talk to each other, pondering little amendments to the existing legal frameworks. There is a need for the right balance – on the institutional level – between being concrete and looking at the big picture, between being on the ground and seeing the process as a whole, consisting of numerous small parts. Moreover, regulators should strike a good balance between hard regulation – prohibitions, obligations, black lists etc. – and enabling civil society and good faith companies to work for the common good. That is an important task for the law: enable the action! Too much or too little of either command or delegation to civil society is a no-go. However, to know how much to do where, we need to simultaneously stay on the battlefield, case-by-case, **and** take the bird-eye view.

3. EU consumer law

EU Consumer Law's ambition is to mitigate the factual inequality between consumers and business by legally empowering the consumers and their organizations. This is grounded in several substantive general principles: weaker party protection, non-discrimination, regulated autonomy and consumer privacy. It took shape dictated by the challenges of the time. Consumer law mechanisms currently range from the prohibition of using unfair contract terms to prohibitions of unfair commercial practices, from information duties to granting consumers rights, from product safety standards to liability rules. **These mechanisms require an update.** A right balance needs to be struck between enhancing the autonomy of consumers (rights + information requirements), and full-fledged regulation (prohibitions of certain practices, black lists, white lists). Businesses need to know what they are *exactly* not allowed to do. Businesses also need to know what they *are* allowed to do. Just as everywhere else, action here needs to proceed case-by-case, bottom-up, though with the big picture in mind.

3.1. Targeted commercial practices

No one, including myself, knew that at 2 a.m. I'm prone to buying stuff that features puppies

Ads and influence through other means are one of the most pressing challenges to be addressed by EU consumer law. The general definition of "aggressive commercial practices" from the Unfair Commercial Practices Directive leaves a lot of space for interpretation. UCPD (art 8.) defines it as follows:

"A commercial practice shall be regarded as aggressive if, in its factual context, taking account of all its features and circumstances, by harassment, coercion, including the use of physical force, or **undue influence**, it significantly impairs or is likely to significantly impair the average consumer's freedom of choice or conduct with regard to the product and thereby causes him or is likely to cause him **to take a transactional decision that he would not have taken otherwise.**"

Further, art. 9 suggests to take into account, among others:

"timing, location, nature or persistence (...) the exploitation by the trader of **any specific misfortune or circumstance** of such gravity as to impair the consumer's judgement, of which the trader is aware, to influence the consumer's decision with regard to the product".

This could sound promising – it does seem that any big-data-fueled, AI-powered system that targets consumers to exploit their vulnerabilities is unlawful. However, taking the reservations from the previous section into account, how do we get from this nice provision to a fair commercial practice? When one consults the Annex to the UCPD, one will see that the examples come from the analog era. What is desperately needed is a consideration of **what algorithmic practices** should be **treated as unfair**, given the technical possibilities. The exploitation of which circumstances should be prohibited: health? financial situation? age? hardware used?. What cognitive biases? Are there certain sectors where we should fully prohibit targeted personalized ads? Are there sectors where we should be stricter? (Pharmaceuticals? Healthcare? Games for children?) How to best design the governance system: through administrative fines, consumer rights actionable in class actions? Would it help here to give consumer rights that can be pooled by activists?

3.2. Unfair contractual and algorithmic terms

I have not read the terms of service. But my robot has, and it does not like them.

Every single website and app we use has its own terms of service (ToS) and privacy policy. Most of these websites and apps already use AI-powered systems to generate knowledge from the data they gather about consumers. In principle, these terms of service need to meet the fairness test from the Unfair Contract Terms Directive:

“A contractual term which has not been individually negotiated shall be regarded as unfair if, contrary to the requirement of good faith, it causes a significant imbalance in the parties' rights and obligations arising under the contract, to the detriment of the consumer.”

However, ToS are full of unfair clauses. Furthermore, if a company uses AI to monitor the behavior of consumers, but its ToS prohibits consumers from using bots to monitor the website, is that already a significant imbalance? The question exemplifies the general problem: just like with UCPD, the Annex of UCTD and the ECJ's case law pertain to analog examples only. A clear indication of what tech-specific terms should be considered unfair is desperately needed. In addition, the application of the contractual fairness test to privacy policies should be considered (in the US, for example, many consider these documents contracts). Moreover, law should clearly state that consumers and civil society are allowed to use AI themselves to scan ToS and the algorithmic practices and cannot be blocked from doing this. That is also where consumer law and copyright law should be analyzed jointly. Because, finally, in the world where it is not the contract but the code that shapes the legal relations, maybe we should consider certain ‘algorithmic terms’ unfair?

3.3. Special data processing regulations

“But we told you we gather your data to exploit your vulnerabilities!”

The GDPR put in place a comprehensive, horizontal regulation of data processing. Even though it was not created to specifically target AI, it indirectly did so. The reason for this is that AI nowadays means using machine learning to make sense of data, big part of which is personal (consumer) information. The GDPR's governance scheme includes obligations for data controllers to process data fairly, and among others to inform data subjects about the purpose of processing. It also prohibits collecting more data than necessary for the purpose, and processing data for other purposes. **However, it says nothing about what purposes are fine and what are not. This needs to be regulated elsewhere.** It might be that data created by smart grids needs to be processed in accordance with other specific norms than shopping history. We already have special rules for medical data; why not for other information which could be misused? Broken down according to the degree of sensitivity and vulnerability?

4. Civil society

The NSA scandal and current political developments suggest that caution is needed with regard to the assumption that states and public power will be the ones to best protect the people from the challenges of AI. Similarly, the Cambridge Analytica scandal puts into question the presumption that companies themselves will sacrifice potential gains to protect the consumers. Hence, as always, there is a big role to be played by the civil society. The game is not fair, and will not be. The third sector is naturally much smaller than the states and the corporations; and currently the public and private giants are the ones with capabilities to develop and employ the AI. But this does not have to remain this way.

4.1. Seize the opportunities of AI

“The Prime Minister gazed hopelessly at the pair of them for a moment, then the words he had fought to suppress all evening burst from him at last. “But for heaven's sake — you're wizards! You can do magic! Surely you can sort out — well — anything!” Scrimgeour turned slowly on the spot and exchanged an incredulous look with Fudge, who really did manage a smile this time as he said kindly, “The trouble is, the other side can do magic too, Prime Minister.”

J.K. Rowling, *Harry Potter and the Half-Blood Prince*

Artificial intelligence is **not** magic, but as of now only the “other side” – the state and the big corporations – can “do it”. This, however, can change. Civil society can also use AI to increase the

efficiency and effectiveness of its work. Two recent examples created at the European University Institute are just a small droplet in an ocean of possibilities: AI tools for automated evaluation of terms of service and privacy policies using machine learning. A change of mindset and new alliances are necessary. Not everything can be automated. But a lot can, much more easily than one would assume. If you are a consumer activist, think of where you feel automation could help you. Talk to AI researchers. Talk to digital rights activists. Search around on the internet. It might be that the burdensome work you are now engaged in, or currently do not even have the capacities to undertake, could be executed by your own machines.

4.2. Reuse the existing instruments

The challenge for consumers is not the inadequate law, but the unlawful business practice

Strategic litigation. Media pressure. For a legion of reasons, the EU's legislative process is not the fastest right now. And while many challenges posed by AI are new and revolutionary, numerous problematic business practices *do or might* fall under the provisions that already exist. Take the instruments that you have, including the ones mentioned above, and start legal action. Read these terms of service and privacy policies. Take the unfair ones and challenge. Use the existing concepts of aggressive advertising. Use the GDPR to get the information about automated processing and types of data processed. Use the sectorial regulations. A lot of "AI" is the same as before, just faster and deeper.

4.3. Inform and lobby for change

If you are reading this, you are interested in consumer law and AI. Directly. Would you call yourself an expert on the subject? If not really, how can we expect the public and policymakers – who are only indirectly interested in consumer law and AI – to understand what is going on? First inform yourselves, then others. Once the society understands what exactly is at stake, the political will to amend the outdated legal instruments will emerge. What should be changed? The list is long: unfair algorithmic terms, unfair commercial practices, privacy intrusion, market lock-out, quality of information and products – there is a lot to lobby against. And business is doing its share already.

5. Academia

The last couple of years have seen a proliferation of legal scholarly output concerned with challenges and opportunities that the advances in artificial intelligence pose to law, legal practice and legal theory. A detailed analysis is offered in the full report.⁴ This first phase of initial familiarization and excitement was necessary and good, but this is just the beginning. Among many good contributions, certain trends can be identified where there is room for improvement.

5.1. Start with empirics

If we are to evaluate the facts, let us first get the facts right

Artificial intelligence is a new phenomenon for most of us. Even if we use AI-powered tools everyday - search engines, SPAM filters, Spotify/Netflix/Amazon suggestions etc. - we often do not fully understand how these systems actually function. At the same time, most of us have a certain idea about the "nature" of "intelligent machines", coming from sci-fi books and movies like *Her*, *Westworld* or *I, Robot*, to mention just a few. Now, what these works of culture depict has often quite little to do with what AI is today and what it will be in the foreseeable future. Our analysis of the market and scholarly

⁴ Consumer Law and Artificial Intelligence Challenges to the EU Consumer Law and Policy Stemming from the Business's Use of Artificial Intelligence, available at: <https://artsy.eui.eu/final-reports/>

practice indicates the existence of a wide gap between what is actually going on and what scholars are writing about. The amount of articles containing a legal analysis of the use of AI in advertising is surprisingly low. Certain widely-discussed questions, like those of robots' rights or the desirability of granting them legal personality, assume a reality incredibly far-removed from what one can observe today. Granted, these questions are theoretically interesting, and should not be completely abandoned. Nevertheless, given that the policy makers are discussing regulation right now, it is the role of academia to enhance the general understanding of the issues of today and tomorrow. To do so, legal scholars should base their normative analysis on empirical data. If you are a lawyer and want to study AI, talk to people who know the AI. Talk to engineers. Pair up with social scientists. Gather some data. Start with finding out what is actually going on, before saying what should be going on.

5.2. Solutionism: What is whose role?

The joke of today: three lawyers walk into a bar and discuss how to regulate the AI

One lawyerly *déformation professionnelle* is the belief that if we know what the problem is, we know how to fix it. For example: is there a problem of accountability of many AI-based systems? Then let us create an administrative agency and make corporations disclose the source code. Can artificial agents infringe the law? Then we should create a certification body or make them liable! Even more strikingly, some legal scholars seem to know the solution even before they know what the problem is (take the discussion on legal personality for AI). This leads to the question: what is the role of legal scholarship in the debates about the governance and regulation of AI? What is the role of academia in general, as opposed to corporate actors, think tanks and expert groups? We claim that it is to provide **critical reflection**, to **question assumptions** and propose **creative schemes**. To argue, to discuss and to learn from one's errors. The lawmaker, when putting regulation in place, should not be completely wrong. The role of scholars is to help avoid that. To think out of the (existing tool)box.

5.3. Last but not least: Wise interdisciplinarity

If the widespread development and deployment of AI really constitutes a revolution, there will be no easy answer. We will not come up with three, five or even ten principles ensuring that all will be fine. There will be no AI-act, treaty or regulation. It will take time and effort, and will not happen quickly. One way to make the process smoother is for everyone to acknowledge what they are good at, and where they need help from others. Engineers might have an idea about what concepts like "justice" or "fairness" mean, but there is a high chance that this idea differs from those shared by the society, or enshrined in the law. Legal scholars might have an idea about how to mitigate certain problems, but there is a high chance it is practically inoperable. Policy makers might think they understand business's way of thinking, but there is a high chance that entrepreneurs would be surprised when hearing about it. To move forward, we need to acknowledge the limitations, and involve people with a varied expertise in a mutual dialogue about **goals** (the society we want to live in) and the **means** (both governance structures and technical solutions). The discussion will be an exercise in mutual learning, forgetting, re-learning and testing, full of "ah! I never thought about this" moments. If you are a legal scholar, go talk to engineers who are actually developing AI systems, go talk to entrepreneurs, go talk to activists – or at least read what they have to say.

This is not the time to conclude. We have just started

What now? Now we go back to work. The readers interested in a more detailed analysis are kindly invited to consult the full report *Consumer Law and Artificial Intelligence Challenges to the EU Consumer Law and Policy Stemming from the Business's Use of Artificial Intelligence*, available at: <https://artsy.eui.eu/final-reports/>. We conclude that document with 25 research questions that we believe should be given closer attention in the big game of the intersection between consumer law and artificial intelligence. We encourage everyone to pick them up and proceed with the research. Obviously, there are many more questions to be asked. You will surely get inspired to think of something else. If you want to, shoot us an email. The process is just starting.

For those who do not have the luxury of time, we would like to finish with suggestions for six directions on which we believe intellectual efforts should concentrate:

1. **Increase understanding.** There is an enormous space for empirical research here. We do not fully understand the challenges businesses' use of AI poses, because we do not fully know what they are doing. Keep observing.
2. **Ask the human question in the human way.** Many normative questions we face in the algorithmic age are not machine-specific. Those are, in essence, questions about the society we want to live in. How much we value convenience, how much freedom, how much autonomy, how much privacy, how much innovation, and who "we" are, are all questions that ultimately need to be answered by the people.
3. **Ask the machine question in the machine way.** But the AI is here to stay. People are using it, but AI is not human. And it never will be. How exactly to achieve the goals and what means to employ (and we need to get creative here), is a question that cannot be answered without the interdisciplinary engagement of engineers.
4. **Build tools to empower.** Artificial intelligence cannot remain the domain of the state and big corporations. It can help empower the consumers themselves, as well as civil society. These tools will not be given to us though. We must build them. Find out what is needed. Find out what no one even knows can be useful. And then make it.
5. **Think Small first.** Case-by-case. Bottom-up. AI is not one thing. It does not pose one challenge. Study AI-enabled price discrimination in consumer insurance markets, potential for undue influence in using emotion data while selling psychological counselling online, or actual prices shown to consumers in airline market. Do not begin by studying "the black box problem", "the liability of AI", "the AI-enabled discrimination". Because there is no *the*. Start small...
6. **And then think Big.** Not the other way round! But do go big eventually. See the common patterns, once you know what is happening. Reconsider, re-think, question, break the boxes. Think of the new General Part of the Civil Code. New ways of doing regulation. New goals we might want to strive for. Go empiric, then normative, and finish with philosophy.

