ARTIFICIAL INTELLIGENCE AND CONSUMER RIGHTS
IT Law Lab - Master’s Exam Part I
# TABLE OF CONTENTS

**LIST OF ABBREVIATIONS**  
3

**INTRODUCTION**  
4

**1. AI SOLUTIONS AND CONSUMERS**  
6
    1.1. The definition of AI  
7
    1.2. How AI solutions affect consumer’s rights  
8
    1.3. European consumer law in the context of AI  
11

**2. AI SOLUTIONS AND TRADE SECRETS**  
14
    2.1. Why algorithms should be protected  
15
    2.2. AI solutions as trade secrets  
15
    2.3. The balance between AI protection and consumer rights  
16

**3. ALGORITHMS AS STANDARD TERMS**  
19
    3.1. The definition of standard terms  
19
    3.2. Applying the regulation of standard terms to algorithms  
20
    3.3. Ensuring consumers’ protection  
22

**SUMMARY AND CONCLUSIONS**  
24

**LIST OF LEGAL ACTS**  
25

**BIBLIOGRAPHY**  
27
**LIST OF ABBREVIATIONS**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>AI</td>
<td>Artificial Intelligence</td>
</tr>
<tr>
<td>CJEU</td>
<td>Court of Justice of the European Union</td>
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<tr>
<td>ECJ</td>
<td>European Court of Justice</td>
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<td>EU</td>
<td>European Union</td>
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<td>FICO</td>
<td>The Fair Isaac Corporation</td>
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<td>GDPR</td>
<td>Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)</td>
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<td>IoT</td>
<td>Internet of Things</td>
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<td>ML</td>
<td>Machine Learning</td>
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<td>Obligations Act</td>
<td>Estonian Law of Obligations Act</td>
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<td>Trade Secrets Directive</td>
<td>Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure</td>
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</table>
INTRODUCTION

There is no doubt that artificial intelligence already has a big impact on our daily lives. Nowadays AI is widely employed in mostly all economy spheres, both in private and in public sectors, for tasks ranging from consumers’ behavior prediction to evaluation of credit risk. Thus more and more decisions that affect our lives - whether how much a person can get as a loan or how much a person will pay for the insurance - are being made not by humans, but by algorithms.

Every consumer by using smartphones, computers and electronic means of payment daily leaves behind tones of data that companies thoroughly assemble and use as a means to better predict consumers’ behavior and influence their decisions. For instance, many modern credit-assessment tools now claim to analyze everything from consumer browsing habits and social media connections to how quickly a loan applicant scrolls through an online terms and conditions disclosure.

However, wide use of AI technologies creates a number of risks for consumers and challenges for consumer protection. For instance, for German customers, SCHUFA - Germany’s leading credit bureau - has immense power over their lives: a low SCHUFA score means landlords will refuse to rent an apartment, banks will reject a credit card application and network providers will say ‘no’ to a new Internet contract. But what if the SCHUFA score is low because there are mistakes in the customer’s credit history? Or if the score is calculated by a mathematical model that is biased? The algorithm used by SCHUFA to calculate credit scores is protected as a trade secret so no one knows how the algorithm works and whether there are errors or injustices built into the model or the software\(^1\).

Another example of how algorithms can influence consumers’ lives is the Apple Card sexism scandal, which burst out in August 2019, after tech entrepreneur David Heinemeier Hansson had complained that the Apple Card gave him 20 times the credit limit that his wife got, even though she had a higher credit score and they filed joint tax returns\(^2\). Although it was found out that Hansson's wife was not the only one to be discriminated, there is no evidence yet that the


4
algorithm is sexist. A lack of transparency, however, has been a recurring theme\(^3\). By now it is absolutely unclear how consumers can protect themselves in such situations and which actions should governments and companies take to avoid incorrect and biased algorithmic decisions.

As it was noted in the current IT Law Lab task description, AI algorithms, which are used, for instance, in the process of risk evaluation, are often protected as trade secrets and, hence, businesses are unwilling to disclose any details on that matter, e.g. the exact criteria that are applied to consumers in automated evaluation process. Additionally, these algorithms could potentially be regarded as applying a standard term towards the consumer, falling under the regulation of standard terms and, more specifically, the Unfair Terms Directive\(^4\).

The goal of this research is to analyze whether algorithms could fall under the regulation of standard terms and how would it be possible to ensure a high level of consumer protection in these situations.

The first chapter sets the definition of artificial intelligence and algorithms, describes cornerstones of the European consumer law in the context of artificial intelligence and highlights the implications of AI solutions on consumers in modern realities. The second chapter emphasizes the reasons why AI solutions should be protected and explains why the trade secret protection is the best (and, often, the only one) option for the protection of algorithms. This chapter also addresses the problem of finding a balance between the AI protection and consumer rights. The third chapter discusses the application of the provisions about standard terms under the regulation of standard terms when businesses use AI solutions.

**Keywords:** trade secrets, artificial intelligence, consumer rights, standard terms

**Overview of the contribution:** the research and the proofreading of the document were done by both members of the group. The written part was divided between the members in the following way: chapters 1.1, 1.3 and 2.1 – 2.3 were written by Anastasiia Litvinenko and chapters 1.2 and 3.1-3.3 were written by Bárbara Reis.

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\(^3\) D. Kopf. Goldman Sachs’ misguided World Cup predictions could provide clues to the Apple Card controversy. Quartz, 2019. Available at: https://qz.com/1748321/the-role-of-goldman-sachs-algorithms-in-the-apple-credit-card-scandal/.

1. AI SOLUTIONS AND CONSUMERS

1.1. The definition of AI

In order to start any research, proper definitions should be stated. However, although AI is currently a “hot topic”, no commonly accepted legal definition exists. AI is rather a tool then a final product, as its appearance varies depending on the scope of its application. Both autonomous weapons, self-driving cars, personalized advertising and visual content generation are based on AI solutions and, at the same time, these are obviously different things.

According to the definition, proposed by the High Level Expert Group on AI, set up by the European Commission, “artificial intelligence (AI) systems are software (and possibly also hardware) systems designed by humans that, given a complex goal, act in the physical or digital dimension by perceiving their environment through data acquisition, interpreting the collected structured or unstructured data, reasoning on the knowledge, or processing the information, derived from this data and deciding the best action(s) to take to achieve the given goal”\(^5\).

The aforementioned definition is very broad and still does not give a clear understanding of what should be named “AI” and what should not. However, the truth is that the field of AI (and, hence, the definition of AI) is not constant.

It also should be noted that what is actually happening now, under the label of “artificial intelligence” and “AI solutions”, is businesses using ML to make sense out of vast amounts of data (big data), to generate new knowledge, and act upon that knowledge in order to optimize certain processes, and undertake new tasks, previously impossible. ML is a set of methods that can automatically detect patterns in data, and then use the uncovered patterns to predict future data, or to perform other kinds of decision making under uncertainty\(^6\). ML is a subfield of AI, i.e. every time we talk about ML - we also talk about AI, but not every time we talk about AI - we also talk about ML (e.g. ProjektCyc (1984)\(^7\) is an example of AI without ML).

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As far as a learning algorithm is one of the core elements of ML, the definition of algorithms should also be provided. World Wide Web Foundation in the report on algorithmic accountability stated the following: “Although typically defined as a set of “encoded procedures” or “a logical series of steps for organizing and acting on a body of data to quickly achieve a desired outcome”, the term algorithm is often intended to describe a larger intersection of code, data and automated decisions. Originating from computer science and used in various social science disciplines, the term has been used to convey various meanings on the intertwining of human and machine decision inputs, and the extent to which the term includes code, data and ecosystems often varies8. In lay terms, an algorithm is a finite series of well-defined, computer-implementable instructions (i.e. mathematical formulae or models) to solve a specific set of computable problems9.

The problem is that, when using ML, it is not known how exactly the computer comes to the final solution - the so-called “black box problem”. However, what is known is the task for which the machine was being trained, the learning algorithm that has been employed and the data it has been trained on10.

The idea, on which ML algorithms are based, is that the future would follow similar patterns as the past11. Although, ideally, in order to predict the future behaviour of the person, algorithms should learn how this exact person behaved in the past, usually, the data, which is used for this prediction, answers the question “How have people like this person behaved in the past?” It should be noted that in the statistical universe the existing approach often works. But what about the person who is misunderstood and placed in the “wrong bucket”?12 This is the moment when problems arise. How can someone understand that there is a mistake in the algorithm that was applied to them? What can that person do if he considers his credit score is incorrect? Should consumers know about the algorithms that companies use and, if yes, how much information

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should they have? Are there any risks for consumers when AI solutions are used or algorithms do make more fair decisions?

1.2. How AI solutions affect consumer’s rights

Historically, credit-scoring companies like The Fair Isaac Corporation (FICO) have used relatively simple algorithmic solutions that integrate a limited number of categories of data such as individual's payment history, outstanding debt, length of credit history, pursuit of new credit and debt-to-credit ratio\textsuperscript{13}. While the FICO model may be simple to apply and relatively easy for a loan applicant to understand, this simplicity may also lead to credit decisions that are underinclusive and disadvantage borrowers who have not had prior access to the credit system\textsuperscript{14}. Although the person may have a perfect credit and payment history, the ability to pay back a loan also depends on a number of other factors.

As mentioned before, companies nowadays are able to collect a wide variety of non-traditional data such as social media activity and consumers’ retail spending histories and use sophisticated algorithms to get a more precise credit score for each consumer. However, modern AI solutions also pose significant risks to transparency, accuracy, and fairness.

Prior to the 1980s, most lending decisions were entrusted to individual loan officers and specialists who evaluated applicants on an individual basis\textsuperscript{15}. These underwriting processes were not only labor-intensive, but could be influenced by personal bias. Automated scoring tools, which was not widely adopted until the early 1990s, were viewed as better alternatives that could increase efficiency and avoid the most egregious forms of discrimination\textsuperscript{16}.

It may seem that the cold mind of machines will make more fair decisions. However, in reality this is not entirely true.

One example of algorithmic bias was already mentioned in the introduction - Apple Card sexism scandal - as the way how AI solutions may influence consumers. This is one of the many

\textsuperscript{13} R. Berger. A Rare Glimpse Inside the FICO Credit Score Formula. DoughRoller, 2012. Available at: https://www.doughroller.net/credit/a-rare-glimpse-inside-the-fico-credit-score-formula/.

\textsuperscript{14} M. Hurley, J. Adebayo. Credit scoring in the era of big data. Yale Journal of Law and Technology, 2017. Vol. 18, Iss. 1, Art. 5. Available at: https://digitalcommons.law.yale.edu/yjolt/vol18/iss1/5.


examples of the algorithmic discriminatory decisions. For instance, there are examples of discrimination in online ad delivery\textsuperscript{17} as well as AI-facilitated price discrimination\textsuperscript{18}.

Why would AI make unfair solutions? There are several reasons for algorithmic bias: (i) how the "target variable" and the "class labels" are defined; (ii) labelling the training data; (iii) collecting the training data; (iv) feature selection; and (v) proxies. In addition, (vi), AI systems can be used, on purpose, for discriminatory ends\textsuperscript{19}.

The problems of labelling and collecting the training data stems directly from discriminatory human decisions that were made before and existing bias in the culture and society. For instance, Princeton University-based researchers have demonstrated that common machine-learning programs trained with ordinary human language available online can acquire the cultural biases embedded in the patterns of wording\textsuperscript{20}.

Moreover, another problem may occur when the credit scorer has an overabundance of data points at its disposal. As algorithms integrate more inputs, it becomes more likely that an algorithm might draw a spurious correlation between a particular attribute and a desired output\textsuperscript{21}.

The bias, which follows from the definition of the "target variable" and the "class labels" as well as from the feature selection, is mostly a result of the AI owners' (companies’) incorrect choices and understanding of correlation and causation. Where class attributes are defined subjectively (i.e. when human interpretation was involved), “there is a gray area in which human judgment may have influenced the labeling resulting in bias”\textsuperscript{22}. For example, many employers in the US look for people who studied at famous and expensive universities, but it might be relatively rare for certain racial groups to study at those expensive universities.

\textsuperscript{17} L. Sweeney. Discrimination in Online Ad Delivery. Communications of the ACM. Vol. 56, No. 5. P. 44-54. Available at: https://dataprivacylab.org/projects/onlineads/.
\textsuperscript{18} O. Bennett. AI-facilitated price discrimination and the EU \textit{acquis communautaire}: will the law cope with a pricing revolution? Academia. Available at: https://www.academia.edu/35823318/AI-facilitated_price_discrimination_and_the_EU_acquis_communautaire_will_the_law_cope_with_a_pricing_revolution.
Therefore, it may have discriminatory effects if an employer selects job applicants on the basis of whether they studied at a famous university.\(^{23}\)

Proxies’ problem is "the problem which stems from what researchers call "redundant encodings", cases in which membership in a protected class happens to be encoded in other data. This occurs when a particular piece of data or certain values for that piece of data are highly correlated with membership in specific protected classes." For instance, in 2009 it was found out that the percentage of a given user’s friends who self-identify as gay male is strongly correlated with the sexual orientation of that user, i.e. there is a method for accurately predicting the sexual orientation of Facebook users by analyzing friendship associations.\(^ {24}\)

As there are several reasons for algorithmic bias, there should be different solutions for each of the situations. However, firstly, consumers often do not understand that they are being discriminated and, secondly, until companies protect their AI solutions as trade secrets, there is no way to check if there are any problems in the algorithm. Mistakes are learning opportunities as long as the system receives feedback on the error, but in the current situation with AI and consumer rights there is often no possibility to find out mistakes.

Besides the algorithmic bias, another problematic issue is the implications of AI solutions and algorithms on consumers’ decisions and markets. For example, a search for “iPhone X” on google.de prioritizes the sites of national providers. This is also the case for the search engine versions of other Member States. The fundamental issue for the Digital Single Market (DSM) is brought into focus when a consumer wishes to buy a particular type of product and resorts to an internet search engine for preliminary information. Since a search machine does not limit its results to purely informative sites, but also shows online-shops and advertising geared to the consumer’s search, search machines such as Google can have a strong influence on the purchasing decisions of consumers. In this way, Google discriminates between both consumers as well as e-shop businesses of other Member States who are excluded from the results of searches made by foreign consumers.\(^ {25}\) Moreover, while investigating about the market position

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of Google Shopping, the EU Commission did look inside Google’s algorithm and found out how it was manipulated to favor Google Shopping against other comparison sites. \(^{26}\)

Thus, algorithms can have harmful implications on consumer rights. Society should work to create AI systems that are both beneficial and fair, yet, at the moment, in most cases, only fairness or utility is given relevance, never to both. \(^{27}\)

1.3. European consumer law in the context of AI

In the EU, consumer law has been harmonized in all member states with the help of different legal instruments, covering sectors like shopping, internet and telecommunications, financial products and services and unfair treatment of consumers. \(^{28}\)

As AI solutions are used more and more to provide services and goods to the consumer, it becomes relevant to analyze which principles of consumer law are of relevance, particularly because their application can be impacted by the application of AI solutions. These principles relate to the protection of consumer – the weaker party, regulatory autonomy, non-discrimination and consumer privacy.

One of the first guiding principles of European consumer law concerns the protection of the weaker party. The consumer is considered the weaker party in consumer relationships owning to the imbalance between consumer and supplier/trader. This imbalance occurs due to the asymmetry in the level of knowledge, experience and bargaining power between the two parties in the relationship, where the supplier/trader is the stronger party.

Various legal instruments of European consumer law contain rules to ensure the protection of the weaker party in consumer relationships, such as (1) Directive 2001/95/EC on general product safety, (2) Directive 85/374/EEC on product liability or (3) Directive 93/13/EEC on unfair terms in consumer contracts. Moreover, the Court of Justice has previously interpreted different legal acts according to this principle and continues to do so. \(^{29}\)

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\(^{29}\) See cases C-59/12 Zentrale zur Bekämpfung unlauteren Wettbewerbs; C-497/13 Faber.
When it comes to AI solutions, it is possible to look at consumers in two ways. Firstly, the consumer can be seen according to the responsible or confident model the EU has created, which implies considering the digital consumer well-informed, active, precautious and attentive. On the other hand, it is possible to look at the digital consumer as vulnerable, since technology allows suppliers and traders to exploit the consumer’s vulnerabilities, especially through the possibility of targeting individuals.

Furthermore, information asymmetry has grown with the development of ML algorithms. These algorithms can gather the most diverse information about a consumer – his needs, likes and dislikes or his personal characteristics - which can give a considerable advantage to the owners of these algorithms. Additionally, it is possible that the consumer does not know about this information, the conclusions the algorithm will make about him or that when he interacts in the digital market an algorithm is being used to personalize his ads and content.

Regarding regulated autonomy, autonomy is part of the principle of freedom of contract. The suppliers and traders are free to decide when and on what conditions to enter the markets and the consumer is free to choose the products and services and the conditions in which to enter a legal relationship. Regulated autonomy consists of the legislator increasing private autonomy through legal acts, while also setting boundaries. AI solutions and, specially, those that are capable of influencing the consumer present challenges to autonomy which can be addressed by regulation.

The GDPR is one of the legal acts that contributes to the autonomy of the consumer, by establishing rules for transparency in the processing of personal data. Transparency results in better informed consumers and this contributes to their autonomy. The Directive 2005/29/EC on unfair business-to-consumer commercial practices in the internal market also contributes to the consumer’s autonomy by protecting the freedom of choice.

The next principle concerns non-discrimination. According to this principle, discrimination in the internal market based on sex, race, language, religion, political or other opinion, nationality or social origin, etc., is prohibited.

As it was already mentioned, discrimination is one of the biggest problems posed by AI solutions and, particularly, algorithms. Algorithms are trained on data sets or continually learn from data which is fed to them, however, biases in that data can result in algorithms that discriminate between consumers.30 Geo-blocking, or geographically-based restrictions, is one

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30 A. Jablonowska, M. Kuziemski, A. Nowak, H. Micklitz, P. Palka, G. Sartor. Consumer law and artificial intelligence Challenges to the EU consumer law and policy stemming from the business’ use of artificial
example of situation of discrimination. Here, Member States block of limit access of nationals of other Member States to their online interfaces, hence, consumers are discriminated based on their nationality\textsuperscript{31}. This discrimination presents a big threat to the Digital Single Market in the EU.

A bigger issue lies within the fact that algorithms may operate some kind of discrimination which is not based on the grounds given by the principle of non-discrimination. If there is discrimination between consumers but it does not pertain to any of the elements of the principle of non-discrimination as it has been established, the consumer won’t have any legal protection. A good and important example is discrimination by association, which happens when the algorithm establishes relations between certain situations, which then favour some consumers. An algorithm used to grant loans could, e.g., establish a positive correlation between people who pay back their loans on time and dog owners, hence, favoring people who own dogs\textsuperscript{32}. Moreover, in these cases, the consumer may find it hard to prove that he is being discriminated.

Even though discrimination is prohibited and legal acts in consumer law establish rules for non-discrimination, it is still a problem. A problem that is growing with the increased application of AI solutions. At the same time, AI solutions pose new challenges and have raised questions regarding the current scope of the non-discrimination principle.

Consumer privacy is the last principle of relevance when talking about AI solutions. The development of technology has led to a new era, where everything is on the internet, leading to rising concerns about data privacy and also data protection. AI solutions threaten consumers’ privacy, e.g., IoT with their cameras and microphones always listening.

The adoption of the GDPR was an important step taken by the EU to protect consumers’ privacy and protect the personal data they share.


2. AI SOLUTIONS AND TRADE SECRETS

2.1. Why algorithms should be protected

There are many opinions on why companies should make their algorithms open to the public and why it will help ensuring a higher level of compliance with consumer law and protection for consumers. As it was already mentioned, the use of AI solutions by organizations may have harmful consequences for consumers indeed. However, disclosure of algorithms is not the best solution when it comes to consumer law.

Firstly, keeping algorithms in secret helps companies to protect themselves and their consumers from other consumers: if people knew what are the exact variables and weights of the formula, they could start manipulating this information to artificially get better scores. If a considerable number of people abuse the system and get big loans without real ability to pay it back, banks won’t get enough money to pay to their honest customers. In result, the bank may go bankrupt and people may lose their money.

Secondly, the algorithm of credit scoring calculation is a powerful tool that helps to outperform the competitors: the more accurate the algorithm, the less risk the company has, hence, the more money the company gets. Thus, the lenders are interested in getting the most accurate scoring model possible, so as to maximize profit against other lenders. If they have the better algorithms, then they can make more profit by widening the spread between their defaults, cost of funds, and charged interest rates.

Thus, companies have a strong interest in keeping their AI solutions in secret. But what is the best way to protect them?

2.2. AI solutions as trade secrets

Under the Article 2 of the EU Directive 2016/943, ‘trade secret’ means information which meets all of the following requirements: (a) it is secret in the sense that it is not, as a body or in the precise configuration and assembly of its components, generally known among or readily accessible to persons within the circles that normally deal with the kind of information in question; (b) it has commercial value because it is secret; (c) it has been subject to reasonable

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steps under the circumstances, by the person lawfully in control of the information, to keep it secret. According to the aforementioned definition, trade secrets’ protection covers also “ideas”, not only expressions.

EU rules on trade secrecy expressly protect know-how: the very same title of the Trade Secrets Directive drives under the umbrella name of trade secrets «undisclosed know-how» and, in addition, in several recitals, the Trade Secrets Directive groups together know-how and business information\textsuperscript{34}. For instance, Recital 1 clarifies that the “valuable know-how and business information, that is undisclosed and intended to remain confidential, is referred to as a trade secret” and Recital 3 states that “trade secrets are one of the most commonly used forms of protection of intellectual creation and innovative know-how by businesses”. Thus, the notion of trade secrets does cover pieces of information functional to production and distribution, such as the instructions for the realization of a commodity, formulas or industrial procedures, drawings relating to machinery for production or products, internal manuals, product specifications, as well as test and test results.

Hence, since algorithms command how to pursue a task, they can well be qualified as pieces of know-how. In addition, the fact that the combinations of formulas from which algorithms are made can be protected could also be inferred from Article 2(1)(a), which states that a trade secret shall be ascertainable «as a body or in the precise configuration and assembly of its components»\textsuperscript{35}.

Finally, as expressed in Recital 14, the notion of trade secret must be interpreted extensively, because, to spur innovation and guarantee the safe circulation of knowledge, legislators cannot impose peculiar hurdles to prevent firms from making secret the results of their investments\textsuperscript{36}.

Trade secrets are particularly suited to technologies that are not capable of independent discovery or reverse engineering, technologies that are rapidly replaced by new innovations and technologies that cannot be described without expending significant effort, all of which are especially prevalent in AI\textsuperscript{37}.

As far as AI can be described as a mathematical method or a collection of algorithms based on mathematical models, it cannot be patented in the EU under the article 52 of the European

\textsuperscript{35} Ibid.
\textsuperscript{36} Ibid.
Furthermore, algorithms are not eligible for copyright protection, because it will be considered as a factual nature and, therefore, not an expression of the creativity of its author. Thus, for AI solutions in most cases trade secrets protection is the only possible way to defend the intellectual property.

Trade secret law, like other forms of intellectual property protection, is intended to promote information creation and dissemination. This makes it inextricably intertwined with fundamental rights to freedom of expression and access to information. However, unlike patents and copyright, while trade secret law protects certain kinds of information as intellectual property protection, it lacks any expressly delineated social justice balancing mechanism between the rightsholder and the public - the general model of IP protection - protection for a work or invention in exchange for the public benefiting from an expanded corpus of knowledge - is not followed.

2.3. The balance between AI protection and consumer rights

Nowadays companies tend to protect their AI solutions as trade secrets, thereby making it extremely difficult for consumers to understand what indicators affect their consumer rights and what steps they should take to responsibly improve the situation. If trade secret protection operated less like a binary, where the only options for a company are complete secrecy and transparency, there could be fair and balanced trade secret protection. Intellectual property law and policy governing trade secrets should be reformed so that there is an equitable balance between people’s liberty interests and a company’s interest in maintaining its trade secret.

Additionally, there must be structured frameworks for limited disclosure of trade secret protected algorithms used in the criminal justice system when they are challenged by a defendant.

There are court decisions in the EU which concern the balance between consumer rights and trade secrets protection. On January 28, 2014, the Federal Court of Justice of Germany clarified the scope of a data subject’s right of access to personal data in the context of credit scoring. The

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41 Ibid.
court had to decide whether this required a credit reference agency to disclose (1) how its scoring algorithm weighed various factors and (2) how the reference groups used to arrive at a credit score were comprised. The court noted that the legislative intent behind the provision was to make credit scoring more transparent to consumers, while also protecting the credit reference agencies’ trade secrets (e.g., the scoring algorithms). Because transparency includes providing information that would enable a data subject to take action to change his or her score, data subjects must be informed about the specific matters the credit reference agencies take into account when calculating credit scores. That said, a data subject does not need to know the agency’s formula for weighing various factors or how the reference groups are comprised. Accordingly, data subjects cannot require credit reference agencies to disclose those types of details. This is relevant to all businesses that process and share personal data subject to German law using predictive algorithms.42

The aforementioned court decision is an example of a balancing solution between the interest of companies and consumers’ protection. On the one hand, the consumer knows the factors that affect his or her credit score. On the other hand, companies still keep their algorithms secret. However, it should be recognized that, in the current situation, it is still almost impossible to find out is there any bias in the algorithm. But at the same time the risk of biased decision is the same as if the decision were made solely by a human being.

The optimal solution would be the creation of a state or international body or the extension of the powers of one of the existing bodies that would control the quality of algorithms that are applied to consumers. For instance, many companies protect their food recipes as company’s trade secrets, but the quality of their products is still being controlled by the authorities responsible for food production. This is a good example of how to achieve balance - companies still get profit and consumers are protected.

Moreover, according to Article 1(2)(b) and Recital 11 of the Trade Secrets Directive, this Directive shall not affect the application of Union or national rules requiring trade secret holders to disclose, for reasons of public interest, information, including trade secrets, to the public or to administrative or judicial authorities for the performance of the duties of those authorities. Thus, the protection of trade secrets is subordinated to the protection of the public interest and the proposed solution falls into the scope of the existing regulation.

The direct disclosure of the algorithm’s details, such as formulas and other technical specifications, to consumers will not have much effect for their protection (and may even be harmful for the aforementioned reasons) as usually consumers lack knowledge required to fully analyze AI solutions. Thus, inspection of the accuracy of algorithms by public authorities is the balancing solution that will protect both consumers and AI owners (businesses).
3. ALGORITHMS AS STANDARD TERMS

3.1. The definition of standard terms

The classification of algorithms as trade secrets, as mentioned before, brings about different problems to the consumer, however, another important issue relates to the fact that many times AI solutions, and more specifically algorithms, are used by businesses and services without the customer having the opportunity to make a choice.

The most common examples occur when the customer applies for credit or insurance and an algorithm is used in the credit or insurance risk evaluation. The use of an algorithm in this evaluation process is not negotiated by both parts. This situation raises the question of whether the use of algorithms by business and services could be considered a standard term, thus, falling under the regulation of standard terms.

Standard terms are terms which were drafted in advance to be used in contracts or, in general, terms that the parties to the contract did not negotiate individually beforehand. These terms are used by the party supplying them without requiring or even allowing the involvement of the other party. Whenever a party is not allowed to negotiate the content of the term, when the term (or contract) is proposed on a “take it or leave it” basis\(^\text{43}\), it is considered a standard term and the specific regulation applies.

The definition of standard term given above can be found in Division 2, § 35 of the Obligations Act. The norms regarding standard terms can all be found in Division 2 of this act.

The purpose of the regulation of standard terms is to determine when contract terms are to be considered standard terms, as these terms can be embodied in the contract of form a separate part of the contract.

Moreover, standard terms contracts are most common in situations where there is a potential imbalance between the parties to the contract. One of the parties, the one that determines the standard terms, usually has specific advantages, such as having more information regarding what is in the contract, while the other party has to analyze the contract to find problems, or the reduced transaction costs of using the same standard terms for every customer. Additionally,

this imbalance also exists in regard to the bargaining power of the parties, as, frequently, one of the parties is a trader and the other a consumer.

Standard terms as they have been established by the law present a creation that diverges from the principle of freedom of contract, which grants the parties the freedom to decide on the entry into a contract, on its content and on the other party of the contract\textsuperscript{44}. In contracts with terms fixed in advance by the other party, the customer still decides about its entry into the contrary, however, his/her freedom of contract is restricted, since it is not possible to modify or negotiate the content with the other party. Furthermore, monopolies and oligopolies, among other types of agreements, are susceptible of generating abusive or inconvenient situations for the customer, who may be confronted with only one option for a certain service, which is provided by only one company in the market and uses standard terms contracts.

In EU Member States, regulation of standard terms includes rules regarding unfair terms in consumer contracts. This was achieved with the Council Directive 93/13/EEC of 5 April 1993 on unfair terms in consumer contracts, which aims to protect the consumer from situations where the other party may take advantage of the consumer’s weaker position.

Nowadays, it is almost impossible for the customer to avoid standard terms. Many services and goods are provided to a significant number of persons, therefore, utilizing standard terms allows companies to reduce time and costs expended in contract drafting. Standard terms have become the norm.

3.2. Applying the regulation of standard terms to algorithms

As it was already mentioned, the application of AI solutions by businesses and services has become more and more common, namely in sectors like finance and insurance, information services (i.e. business models of social media, online advertising, content hosting and screening, etc.), energy, retail, autonomous vehicles, healthcare and legal\textsuperscript{45}.

Although the application of AI solutions is widespread over different sectors, the most relevant cases concern situations where algorithms are used at some point in the contractual relationship and the customer is somehow affected by the algorithm’s conclusions, negatively or positively.


For example, when a customer applies for credit, the application process includes a risk evaluation at the beginning and algorithms are being used to perform this assessment. The same happens when the customer applies for insurance. Since these algorithms are not perfect and because they are “black boxes”, it is important to protect the customer against bias, either accidental or intentional, errors and frauds.

Likewise, it should be taken into consideration that these algorithms are being used by businesses and services to make decisions regarding contracts the parties will enter into, but the customer is not given the option to object to the decision being made by an algorithm. Therefore, it could be possible to consider the use of an algorithm a standard term. More precisely, the issue here relates to the fact that the evaluation process is conducted by an algorithm, without the customer having the possibility to oppose to its use. The decision made by the algorithm is then used for the terms of the contract.

It was already mentioned that standard terms are terms included in a contract and the standard terms regulation states the conditions under which the standard term will be considered part of the contract. If there is a standard term but it is deemed to not form part of the contract, then it is not a part of the contract. However, the use of an algorithm in the risk evaluation usually will not be mentioned in the final contract and will probably not be mentioned in the application for credit either. The new GDPR rules may oblige the companies to inform the customer about the use of an algorithm in the process when the decision is based solely on automated processing, but this is not a situation that will happen in every case and the information does not have to be included in a written agreement.

Whenever the use of an algorithm in the decision process is included in the contract terms and the customer is not able to modify or negotiate this, the terms regarding the use of the algorithm are considered standard terms. This, of course, if the conditions of §37(3) of the Obligations Act are fulfilled, otherwise the terms are excluded from the contract.

When the use of the algorithm is not included in a previous agreement or the contract terms, its use should still be considered a standard term if the customer has to subject himself to the use of the algorithm in order to access the service and cannot negotiate this and, additionally, when the algorithm produces legal similar effects for the customer.

Nevertheless, the current regulation of standard terms may raise some questions concerning the inclusion of algorithms as standard terms when these are not included in the contract, an annex to the contract or any other agreement. If the use of the algorithm is not written as a term or the customer has not been informed about it, the second part of §37(1) of the Obligations Act may
be applicable. The legal provision states that “Standard terms are also part of a contract if their existence could be presumed from the manner in which the contract was entered into and the other party was given the opportunity to examine their contents.” As long as the two requirements are fulfilled, it should be possible to include the use of the algorithm as a standard term.

One other problem pertains to when the contract or credit application, in the case of the credit risk evaluation, includes terms about the risk evaluation but does not specify that an algorithm will be used in the evaluation and this is not mentioned to the customer. This situation raises issues about transparency and the possibility to use the algorithm’s results for making decisions that will affect the customer, and the use of the algorithm cannot even be considered a term of the contract or agreement. Taking into consideration what has been said about algorithms, especially what concerns the implications to consumers’ rights, it should not be possible to conduct a credit risk evaluation with an algorithm if the customer does not know about it.

In conclusion, it is possible to consider the use of algorithms a standard term, however, the regulation of standard terms may fail to apply to many cases, since it is not prepared for this situations.

3.3. Ensuring consumers’ protection

The principle of the weaker party, regulatory autonomy, the principle of non-discrimination and consumer privacy, mentioned previously as guiding principles of European consumer law, constitute the most important aspects when considering the consumer’s protection.

When the use of an algorithm can be considered a standard term, European law and national law already offer a degree of protection. The regulation of standard terms in conjunction with provisions about unfair terms in consumer contracts protects the consumer from situations where it is not possible for him to negotiate the terms of a contract, by establishing which terms of the contract are part of it and which are void.

However, in situations where the use of an algorithm is not communicated to the customer, the question pertains more to transparency and freedom of choice of the consumer. If the use of the algorithm is not communicated, then it is most probably not really possible to say the company is using a standard term.

The obligation to inform the customer about the use on an algorithm in the decision-making process whenever the results are used for purposes that can have serious consequences for the
consumers, such as in credit or insurance risk evaluation, needs to be established. Some changes in this area have already been achieved. More recently, with the GDPR, businesses and services were faced with the obligation to inform the customer of the use of algorithms\(^\text{46}\). Yet, this only applies to situations of automated decision-making, which the GDPR defines as decisions based solely on automated processing. This means that customers now have to be informed that the decision is taken by an algorithm when there is no human intervention only. If there is human intervention or the possibility of a human changing the outcome, then this does not apply.

The protection guaranteed by the GDPR is important, nevertheless, the obligation to inform the customer should be extended to every situation where an algorithm is used to make a decision, whether there is human intervention or not.

Moreover, the customer should have the possibility to object to the use of an algorithm in the decision-making process, due to the possibility of negative consequences. At present, AI solutions pose many risks, thus, it is not conceivable to consider the use of an algorithm in important sectors without giving the customer the option to oppose. In this sense, even though algorithms may be included as standard terms in contracts, it should never be possible to restrict the right of the customer to object. This would also mean algorithms would not be standard terms in reality, as the customer would always have the option to reject its use and request human intervention.

In a future where algorithms are able to make decisions with almost non-existent risks for the consumer, it is possible to conceive algorithms as standard terms in contracts. Still, the opportunity to question that decision should not be taken away from the consumer and a standard term in a contract that would establish this should be considered an unfair term.

Ultimately, it would be important to regulate algorithms specifically, due to the complexity of this sector of AI. The regulation should embody the guiding principles of European law, but mostly, European consumer law, and address issues regarding the right to inform the consumer (and obligation on the business side), classification of algorithms as trade secrets, algorithmic transparency, inclusion of algorithms in contracts and the possibility to object to the use of these algorithms in situations of increased risk.

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\(^{46}\) Article 13(2)(f) of the GDPR.
A definition for AI has not yet been agreed upon, however, it is already known that the increase in the application of AI solutions by businesses and services has completely changed the way customers interact with suppliers and traders and, at the same time, has created new legal challenges.

AI solutions and, more specifically, algorithms have many benefits, such as the possibility to help businesses offer products and services to the customer that better match his preferences, but they have also impacted consumer rights. These new technologies are often a puzzle for the consumer, who does not know how they work (e.g. how a decision-making algorithm works). There is also a lack of information regarding the use of these algorithms. This unawareness prevents consumers from opposing the use of AI solutions and making informed decisions. Problems concerning discrimination, privacy, among other situations, are also common.

The advantage that algorithms confer upon businesses and services has made them a powerful tool in the market, thus, leading companies try to protect these AI solutions as trade secrets. Classifying algorithms as trade secrets is important for businesses, but it brings downsides for the consumer, as secrecy hinders transparency and, consequently, affects the ability of the consumer to make informed decisions.

Despite this, it has also been proved that a balance can be achieved between the businesses’ interests and the consumers’ rights, as a few court decisions in Member States of the EU have shown, by finding a “middle ground” – businesses can profit, and consumers are protected.

Finally, algorithms can also be seen as standard terms in some situations, hence, falling under the scope of the regulation of standard terms. This ensures a certain level of protection for the consumer. However, it will happen in many cases that the use of algorithms escapes the application of this regulation, as it is possible to use algorithms without establishing them as a term. In these situations, though, the bigger problem concerns the lack of transparency on the businesses’ side towards the consumer.

The current legal acts still have a long way to go in order to ensure complete protection of the consumer when it concerns AI solutions. Some steps have been taken already, namely the adoption of the GDPR, but much still has to be done.
LIST OF LEGAL ACTS

1. Convention on the Grant of European Patents (European Patent Convention) of 5 October 1973 as revised by the Act revising Article 63 EPC of 17 December 1991 and the Act revising the EPC of 29 November 2000;


CASE LAW

1. ECJ C-59/12, BKK Mobil Oil Körperschaft des öffentlichen Rechts v. Zentrale zur Bekämpfung unlauteren Wettbewerbs eV, 3 October 2013;

2. ECJ C-497/13, Froukje Faber v. Autobedrijf Hazet Ochten BV.

DECISIONS OF THE EUROPEAN COMMISSION

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