The legal concept of discrimination by association: where does it fit into the digital era?

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ABSTRACT: *Personal autonomy, a core human rights principle, refers to the ability to both design and conduct the course of one's life through making choices from a range of valuable options. This plays a pivotal role in the realm of equality and non-discrimination, which are relevant in the context of the European Union (EU). Through case law, the concept of discrimination by association has emerged as a crucial step in strengthening anti-discrimination, recognising that individuals who are not part of a protected group but who have a relationship with someone who is, or are in some way associated with them, may be treated unfavourably, thus requiring appropriate remedies. Currently, the field of non-discrimination increasingly warrants attention, due to the rapid advancement of technology, which harbours unique discriminatory potential. For instance, through data mining and the use of artificial intelligence tools for profiling and clustering, people may be grouped based on collective characteristics that may not accurately represent their individual features, resulting in differential treatment regardless of whether legally recognised vulnerable groups are involved. It therefore becomes crucial to question to what extent discrimination by association can effectively address this discriminatory power or whether new measures need to be developed to safeguard personal autonomy and prevent the proliferation of such phenomena in the current digital landscape.*

KEYWORDS: *Personal autonomy – equality and non-discrimination – discrimination by association – profiling – data protection.*

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Introductory remarks

Case C-634/21 - SCHUFA (Scoring) is pending at the Court of Justice of the European Union (CJEU) and has already been the subject of a previous written comment in this blog and respective journal.[1] SCHUFA is a German scoring agency which defines and sells third party credit scores to financial entities. Such agency predicts the probability of future behaviour, such as the refund of a credit, based on certain characteristics of the person assessed, and using a mathematical-statistical procedure. Neither the characteristics considered in the profiling nor the method on which the procedure is based are made public.

Profiling is used to analyse or predict aspects concerning personal performance at work, economic situation, health, personal preferences, interests, reliability, behaviour, location, movements. The attribution of a credit score is based on the assumption that, by including a person in a group of individuals who: i) have comparable characteristics; and ii) have in the past engaged in certain conduct, it is possible to predict the likelihood of similar behaviour of the person assessed.[2] But would not such categorisation or grouping of individuals based on their likely similarity to other people's behaviour lead to a form of discrimination by association prohibited by European Union (EU) law? This is the issue we want to build on and explore in this text.

Discrimination by association occurs when an individual who, for example, is not disabled, is treated unfavourably on the basis of the disability of someone with whom he or she has a close relationship; or when someone who does not belong to a given ethnic group is treated less favourably on the grounds that he or she lives in a neighbourhood inhabited predominantly by a given ethnic group. This prompts us to ask: would it be legally justifiable to integrate an individual into any group and then draw unfavourable conclusions about him or her based on the characteristics or behaviour of others? To what extent does this affect the exercise of his/her own choices or the conditions of his/her individual autonomy?

As Advocate General (AG) Poiares Maduro explained in his Opinion in the *Coleman* judgment, it is useful to recall the values inherent in equality in order to determine what equality requires in each situation: these are human dignity and personal autonomy. "*At its bare minimum, human dignity entails the recognition of the equal worth of every individual.*" And it follows from personal autonomy that individuals should be able "*to design and conduct the course of their lives through a succession of choices among different valuable options. The exercise of autonomy presupposes that people are given a range of valuable options from which to choose.*"[3]

In this segment, the AG further explains that a commitment to autonomy means that individuals should not be deprived of the ability to make valid choices.

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[1] See Alessandra Silveira, "Finally, the ECJ is interpreting Article 22 GDPR (on individual decisions based solely on automated processing, including profiling)", *Official blog of UNIO – EU Law Journal – Thinking and Debating Europe*, April 10, 2023, accessed 11 June 2023, https://officialblogofunio. com/2023/04/10/finally-the-ecj-is-interpreting-article-22-gdpr-on-individual-decisions-based-solely-on-automated-processing-including-profiling/. See also Alessandra Silveira, "Automated individual decision-making and profiling [on case C-634/21 - SCHUFA (Scoring)]", *UNIO - EU Law Journal*, Vol. 8, No. 2, March (2023).

[2] Alessandra Silveira, "Automated individual decision-making and profiling [on case C-634/21 - SCHUFA (Scoring)]", 79.

[3] Opinion of Advocate General Poiares Maduro delivered on 31 January 2008 [Judgment *Coleman*, 17 July 2008, Case C-303/06], ECLI:EU:C:2008:61, Recital 9.

Now, an individual's ability to lead an autonomous life "*is seriously compromised since an important aspect of her life is shaped not by her own choices but by the prejudice of someone else.*"[4] In essence, "*by valuing equality and committing ourselves to realising equality through the law, we aim at sustaining for every person the conditions for an autonomous life.*"[5]

In this respect, it is important to determine whether the principle of equality, according to which those who are equal should be treated equally and those who are unequal should be treated unequally to the extent of their inequality, makes it possible to challenge the disadvantage resulting from the association of one individual with the behaviour of another, that is, the incidence of discrimination by association.

When someone is treated unfavourably because he/she is compared to another person according to unclear characteristics or criteria – which may or may not be related to age, ethnic origin, social origin, poverty, or other factors listed in Article 21 of the Charter of Fundamental Rights of the European Union ("CFREU") – can this amount to discrimination by association?

Ricardo Pinto, in his commentary regarding Article 20 of the CFREU – on equality before the law –, highlights how equality appears, primarily, as an ethical ideal, and with the advent and express consecration of social, economic, and cultural rights, equality has increasingly come to correspond to a substantive equality. Thus, legal equality and non-discrimination are two sides of the same coin, and equality also calls for a concern with differentiation – equal treatment for what is equal and unequal treatment for what is unequal. According to Ricardo Pinto, the understanding of the CFREU may be tempting for those who intend to devalue normatively the principle of equality, arguing that it is empty of content. However, the legal equality drags on the *de facto* equality, making it necessary to convoke non-discrimination when equality/inequality is discussed.[6] Indeed, non-discrimination gives concrete expression to the postulate of equality.

1. The *Coleman* case and the jurisprudential shift in addressing discrimination

The EU has long been committed to protecting the principle of non-discrimination, and this is reflected in its incorporation in several Directives[7] as well as in the CFREU in its Article 21.[8] Indeed, as Mariana Canotilho underlines, the construction of the Union itself and the need to deepen the integration process have

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[4] Opinion of Advocate General Poiares Maduro delivered on 31 January 2008, Recital 11.

[5] Opinion of Advocate General Poiares Maduro delivered on 31 January 2008, Recital 11.

[6] Ricardo Leite Pinto, "Comentário ao Artigo 20", in *Carta dos Direitos Fundamentais da União Europeia Comentada,* ed. Alessandra Silveira and Mariana Canotilho (Coimbra: Almedina, 2013), 255-257.

[7] See Directive 2000/43/EC against discrimination on grounds of race and ethnic origin; Directive 2000/78/EC establishing a general framework for equal treatment in employment and occupation; Directive 2006/54/EC on the implementation of the principle of equal opportunities and equal treatment of men and women in matters of employment and occupation; Directive 2004/113/EC implementing the principle of equal treatment between men and women in the access to and supply of goods and services; Directive 2010/41/EU on the application of the principle of equal treatment between men and women engaged in an activity in a self-employed capacity and repealing Council Directive 86/613/EE. Given the competences of the EU, it is clear that equality and non-discrimination have a particular impact in labour law. On the subject see Teresa Coelho Moreira, *Igualdade e não discriminação – Estudos de direito do trabalho* (Almedina, 2013).

[8] Article 21(1): "Any discrimination based on any ground such as sex, race, colour, ethnic or social origin, genetic features, language, religion or belief, political or any other opinion, membership of a national minority, property, birth, disability, age or sexual orientation shall be prohibited."

given rise to a well-founded concern on the part of the EU institutions with regard to discrimination.[9]

In her commentary on Article 21 of the CFREU, Mariana Canotilho stresses that the distinction between direct and indirect discrimination under EU law is fundamental to the effectiveness of the principle of non-discrimination and that this distinction is based on the visibility of the discrimination. While direct discrimination is overt and manifest, indirect discrimination occurs where a measure, based on apparently neutral criteria, is in fact liable to disadvantage a particular group of individuals protected by the prohibition of discrimination.[10]

One should note that, while citing Catherine Barnard, Mariana Canotilho explains that the principle of non-discrimination allows us to fill the void resulting from the principle of equality as a formal principle – although it tells us that all individuals should be treated as equal, it does not allow us to determine which element of comparison is relevant, this is, to determine to what extent individuals should be treated as equal. In this sense, the principle of non-discrimination identifies valid and invalid criteria for distinguishing between persons and situations. However – and again according to Mariana Canotilho in her interpretation of Catherine Barnard –, this understanding of non-discrimination is clearly insufficient. Also, long has the doctrine been affirming the need to consider a substantial concept of equality, since mere formal equality often perpetuates real inequalities. A reconceptualisation of the idea of equality is advanced in Canotilho's view not on the basis of difference, but on the basis of disadvantage.[11] In fact, simply referring to difference is not enough, since the difference often lies in the very nature of things: no man will ever be similar to a woman. For instance, this concept of disadvantage is of interest because discrimination by association has to do with the situation of people who are at a disadvantage, on the basis of a proximity/association that they do not have control over.

The well-known *Coleman*[12] judgment held by the CJEU in 2008 is a paradigmatic moment in jurisprudence, as it contributed to the definition of the concept of discrimination by association. The facts of the case involved, in brief, an allegation by the applicant (Sharon Coleman) that she had been discriminated against in the workplace because she had a child with a disability that she cared for. The applicant alleged that she had been harassed by her employers and refused flexible working. Furthermore, she was denied flexible working while her colleagues without disabled children were able to obtain it. What Ms. Coleman's case comes down to is that she was forced to resign, not because she suffered from a disability condition, but because her child did, and this impacted her in a discriminatory way in the workplace. The CJEU held that *"although, in a situation such as that in the present case, the person who is subject to direct discrimination on grounds of disability is not herself disabled, the fact remains that it is the disability which, according to Ms Coleman, is the ground for the less favourable treatment which she claims to have suffered"*.[13]

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[9] Mariana Canotilho, "Brevíssimos apontamentos sobre a não discriminação no Direito da União Europeia", *Julgar* no. 14 (2011): 114.

[10] Mariana Canotilho, "Comentário ao Artigo 21", in *Carta dos Direitos Fundamentais da União Europeia Comentada,* ed. Alessandra Silveira and Mariana Canotilho (Coimbra: Almedina, 2013)*,* 265.

[11] Mariana Canotilho, "Brevíssimos apontamentos sobre a não discriminação no Direito da União Europeia", 102.

[12] Judgment CJEU, *Coleman*, 17 July 2008, Case C-303/06, ECLI:EU:C:2008:415.

[13] Judgment CJEU, *Coleman*, Recital 50.

This case was crucial because it opened the door for the judgment of cases involving discrimination, even if with different contours from the *Coleman* case, and which ultimately helped to strengthen the concept of discrimination by association.[14] In the Opinion of Advocate General Kokott in the *CHEZ* case, *"discrimination by association is suffered, first and foremost, by those who are in a close personal relationship with a person possessing one of the characteristics referred to in Article 21 of the Charter of Fundamental Rights and in the anti-discrimination directives".*[15] In any case, *"(…) the existence of such a personal link is certainly not the only conceivable criterion for regarding a person as suffering 'discrimination by association'. The fact that the measure at issue is discriminatory by association may be inherent in the measure itself, in particular where that measure is liable, because of its wholesale and collective character, to affect not only the person possessing one of the characteristics mentioned in Article 21 of the Charter of Fundamental Rights and in the anti-discrimination directives, but also – as a kind of 'collateral damage' – includes other persons."*[16]

According to Yolanda Vásquez, this jurisprudential shift has turned the traditional interpretation of the fundamental right to equality and non-discrimination on its head and – through this jurisprudential journey – it can be observed that, once again, the CJEU has opened a new path for national courts to extend protection to certain conducts that had managed to remain invisible to legal treatment, but which, despite this, or probably thanks to it, generated discriminatory situations of equal gravity to those traditionally dealt with until now.[17]

2. Challenges posed by the digital age and the concept of discrimination by association: providing opportunities to address them?

2.1. A brief assessment of the digital age and the General Data Protection Regulation (GDPR)

As Ulrich Beck highlights, the concerns of today's society are not reduced to making nature useful, but also and essentially involve issues that result from technical-economic development itself – to that extent, modernisation becomes its own object of discussion.[18] In this context, there is an urgent need to search for theories that allow us to perceive newness, to live and to act within it, as we live in a new paradigm, which the author has dubbed the "*digital metamorphosis*". However, it is important to recognise that digital existence and its impact on politics are not predetermined – they represent an ongoing process of replacing old frames of reference with new, largely unknown ones.[19]

It is in this context that the pervasiveness of digital technologies and the phenomenon of Artificial Intelligence (AI) stand out. The concept of AI applies to

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[14] See Judgments *CHEZ Razpredelenie Bulgaria*, 16 July 2015, Case C-83/14, ECLI:EU:C:2015:480 and *Hakelbracht and Others*, 20 June 2019, Case C-404/18, ECLI:EU:C:2019:523.

[15] Opinion of Advocate General Kokott delivered on 12 March 2015 [Judgment *CHEZ Razpredelenie Bulgaria*, 16 July 2015, Case C-83/14], ECLI:EU:C:2015:170, Recital 57.

[16] Opinion of Advocate General Kokott delivered on 12 March 2015, Recital 58.

[17] Yolanda Maneiro Vázquez, "La discriminación por asociación desde la doctrina del Tribunal de Justicia hasta la doctrina judicial nacional. Nuevos retos de las ¿nuevas? formas discriminatorias", *Revista de Trabajo y Seguridad Social*. CEF, 463 (2021): 60. DOI: https://doi.org/10.51302/rtss.2021.2482. (Freely translated by the Author).

[18] Ulrich Beck, *Risk Society* (Sage Publications: 1992), 19.

[19] Ulrich Beck, *The Metamorphosis of the World* (Cambridge: Polity Press, 2016), 145.

systems that exhibit intelligent behaviour, analysing their environment and acting with a certain level of autonomy to achieve specific goals. AI systems and their respective application raise challenges in terms of the protection of fundamental rights, namely that of protection of privacy and non-discrimination, and it is worth noting the concerns regarding the identification and tracking of individuals via AI technologies. As of now, our society is characterised by large flows of information, of data, which provide extensive information about the habits of every individual – it is, as Byung-Chul Han calls it, the society of *infocracy*, in which enterprises and governments take advantage of the information collected to exercise control and make decisions.[20]

The General Data Protection Regulation (GDPR) is the main EU data protection law and aims at protecting natural persons regarding the processing of personal data and rules relating to the free movement of personal data, as well as protecting fundamental rights and freedoms of natural persons and in particular their right to the protection of personal data. In its Article 22(1), one can read that the "*data subject shall have the right not to be subject to a decision based solely on automated processing, including profiling which produces legal effects concerning him or her or similarly significantly affects him or her.*"[21] As Tiago Cabral explains, according to Article 29 of the Working Party on Data Protection (WP29), a decision is considered to produce legal effects when it affects the legal rights, legal status, or contractual rights of a person.[22] Paragraph 2 of that Article 22 sets out the exceptions to the rule, i.e., the conditions under which a solely automated decision may be lawful.

If we consider the example of a data subject who is subject to a solely automated decision because he/she is associated with an individual with a disability, we may ascertain quickly that the conditions set out in the second paragraph for the automated decision to be lawful would not be met. First and foremost, the right not to be subject to an exclusively automated decision shall not apply if the decision is necessary for entering into, or the performance of, a contract between the data subject and a data controller – paragraph 2, (a) – but this would not be the case in the given example, since the contract with the data subject cannot involve data of the person with a disability (this individual does not enter the contract). Secondly, this decision would have to be authorised by the Union or Member State law to which the controller is subject, and which also lays down suitable measures to safeguard the data subject's rights and freedoms and legitimate interests – paragraph 2, (b) –, and no law allowing this would be inconsistent with EU law. Lastly, the decision could apply based on the data subject's explicit consent – paragraph 2, (c) –, but that would neither be the event, because no citizen would freely consent to be discriminated against if he or she was properly informed of the consequences and had an equivalent alternative.

Article 22(4) safeguards that "*decisions referred to in paragraph 2*" – where one can find the exceptions to the rule laid out on paragraph 1 – "*shall not be based on special categories*

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[20] See Byung-Chul Han, *Infocracia*, trans. Ana Falcão Bastos (Lisbon: Relógio D'Água, 2022).

[21] In addressing the GDPR here, we highlight that there is much to be said about its provisions, and that we will not touch on all the issues that it entails. For a comprehensive reading on Article 22 of the GDPR, see Tiago Sérgio Cabral, "AI and the right to explanation: three legal bases under the GDPR", In *Data Protection and Privacy: Data Protection and Artificial Intelligence*, ed. D. Hallinan, R. Leenes & P. De Hert (Oxford: Hart Publishing, 2021).

[22] Tiago Sérgio Cabral, "AI and the right to explanation: three legal bases under the GDPR", 34.

of personal data referred to in Article 9(1), unless point (a) or (g) of Article 9(2) applies and suitable measures to safeguard the data subject's rights and freedoms and legitimate interests are in place." That Article 9(1) states that "*processing of personal data revealing racial or ethnic origin, political opinions, religious or philosophical beliefs, or trade union membership, and the processing of genetic data, biometric data for the purpose of uniquely identifying a natural person, data concerning health or data concerning a natural person's sex life or sexual orientation shall be prohibited*". Moreover, Recital 51 of the GDPR explains that special category data is "*personal data which are, by their nature, particularly sensitive in relation to fundamental rights and freedoms*" and "*merit specific protection as the context of their processing could create significant risks to the fundamental rights and freedoms.*" One should also note that Recital 75 identifies risks to the rights and freedoms of natural persons, among which is discrimination: "*[they] may result from personal data processing which could lead to physical, material or non-material damage, in particular: where the processing may give rise to discrimination, identity theft or fraud, financial loss, damage to the reputation, loss of confidentiality of personal data protected by professional secrecy (…)*".

These provisions are clearly aimed at upholding the principle of non-discrimination by which the EU is governed, as well as generally protecting the right to the protection of personal data, and in that sense, preventing algorithm-based decisions from creating a discriminatory pattern or effect on people and, especially, on vulnerable groups.[23] But are they enough to deal with the challenges that these new methods bring with them, bearing in mind i) the much criticised and reported opacity of algorithmic systems – the so-called "*black boxes*" –, ii) the fact that, despite technology being neutral, the datasets used to train it may not be, and that iii) it is still unknown to the average citizen how algorithms reach a certain conclusion?

Moreover, there are now other elements at play that have to be reflected upon. As Wachter, Mittelstadt and Russel state, AI poses a challenge to the scope of anti-discrimination protection legislation itself, since it cannot be assumed that disparity will occur only between legally protected groups.[24] The authors go on to explain that "*compared to human decision-making, algorithms are not similarly intuitive; they operate at speeds, scale and levels of complexity that defy human understanding, group and act upon classes of people that need not resemble historically protected groups, and do so without potential victims ever being aware of the scope and effects of automated decision-making.*"[25]

Also, as Alessandra Silveira explains, one should be aware that "*despite the praiseworthy exegetical effort carried out by the WP29 – according to which the GDPR would apply to all profiling and automated individual decisions, whether they are based on provided data, observed data, or inferred data – what appears to be true is that the effectiveness of the application of the GDPR to inferred data faces several obstacles. This has to do with fact that the GDPR was designed for data provided directly by the data subject – and not for data inferred by digital technologies such as AI systems*".[26]

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[23] See Davide Baldini, "Article 22 GDPR and prohibition of discrimination. An outdated provision?", *Cyberlaws*, August 20, 2019, accessed April 14, 2023, https://www.cyberlaws.it/en/2019/article-22-gdpr-and-prohibition-of-discrimination-an-outdated-provision/.

[24] Sandra Wachter, Brent Mittelstadt and Chris Russel, "Why fairness cannot be automated: bridging the gap between EU non-discrimination law and AI", *Computer Law & Security Review 41* (2021): 11. DOI: https://dx.doi.org/10.2139/ssrn.3547922.

[25] Sandra Wachter, Brent Mittelstadt and Chris Russel, "Why fairness cannot be automated: bridging the gap between EU non-discrimination law and AI", 6.

[26] Alessandra Silveira, "Finally, the ECJ is interpreting Article 22 GDPR (on individual decisions based solely on automated processing, including profiling)".

How then can Europe prepare itself to deal with the lands of automated governance? Faced with the ubiquity of profiling phenomena produced by AI tools, how can individuals recognise that they are falling victim to automated decisions and to grouping by similarity and potentially be subject to some sort of discriminatory practice?

We shall return to these questions.

2.2 Profiling and clustering: the individual is no longer an individual

Online discrimination is a recurring and worrisome phenomenon because of its discriminatory impact. According to Sandra Wachter, although advertisement practices are not new, "*digital technologies are now devised to peer even further into the needs, interests, and motivations of customers.*" By tracking people's data, advertisement companies can create predictive profiles and, based on the clusters generated, they go on to "*target groups with – and exclude other groups from – product offers or differentiated prices.*"[27] Differentiation thus occurs in the type of products or offers that are (or not) suggested to people depending on the clusters that are built from the collection of data on individuals. Yet this happens at several levels, and the interest of several authors on the investigation of online price discrimination should be highlighted: it refers to the activity conducted by enterprises of customising prices based on information about consumers. That is, if a group of consumers is categorised as heavy spenders because their purchase history suggests such behaviour pattern, the type of products they will be offered will differ from other groups of consumers – with different patterns of consumption – whose activity is tracked and placed in another type of profile. In this sense, consumers are not treated the same, and are not entitled to the same products, benefits, or privileges.[28]

As pointed out by Frederik Borgesius, online shops use cookies to identify and classify website visitors as price-sensitive or price-insensitive, and thus adjust prices based on consumer information. Hence, the goal is to charge each consumer the maximum price they are willing to pay. The author draws on a real case to illustrate this pattern: an online tutoring service called "Princeton Review", which charged different prices in different areas of the US, ranging from USD 6 600 to USD 8 400. The company practiced price differentiation, and the highest prices of the services offered were for individuals of Asian origin. In fact, the investigation into the case carried by Angwin *et al.* revealed that customers from Asian-dense areas were 1.8 times more likely to receive higher price offers, regardless of their income, and while the company may not have intended to racially discriminate, specific ethnic backgrounds ultimately ended up paying more.[29]

As Schermer puts it, "*classification and division are at the heart of profiling*". The author points out that statistics generally shape group profiles, and to that extent, the characteristics of group profiles may be valid for the group and for individuals as members of that group, but not for the individuals themselves. Group profiling

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may thus lead to negative effects on individuals, as the following example illustrates: people living in a particular neighbourhood may be 20 % likely to default on their loan than the average person, and this characteristic applies to the group, to individuals as members of that group, but not necessarily to individuals as such – a process of de-individualisation occurs. This type of clustering can lead to stigmatisation and impair social cohesion given that people are divided into groups in an extremely linear way.

Schermer stresses that when group profiles, whether correct or not, become public knowledge, people may begin to treat each other accordingly and, to that extent, when people begin to believe that individuals from a certain neighbourhood default on their loans more often, they may conclude that those individuals live in a "bad" neighbourhood.[30] In the same vein, Vedder addresses types of generalisations that occur through personal data collection, and the one which the author entitles "*nondistributive*" generalisation is framed in terms of probabilities, on comparisons of group members with each other and/or comparisons of a given group with other groups and, in that sense, individuals themselves do not necessarily share the characteristics that are attributed to this generalisation.[31]

In this context, it is relevant to consider the observations of Alessandro Mantelero, when he states that the use of big data analytics creates "*a new regime of truth*", in which general large-scale approaches are adopted based on representations of society generated by algorithms, which predict future collective behaviour, consequently applied to specific individuals. In turn, the use of analytics and the adoption of decisions based on the behaviour of groups range from commercial and market contexts to the important fields of security and social policies.[32] Moreover, the "*categorical' approach characterising the use of analytics leads policymakers to adopt common solutions for individuals belonging to the same cluster generated by analytics (…) [which] do not consider individuals per se, but as a part of a group of people characterised by some common qualitative factors.*"[33]

3. The interplay between profiling, targeting and the concept of discrimination by association

Why do we regard what we assessed in the previous section of this text as problematic? Let us consider a further example, drawn from Vedder: "*in a credit-scoring application a loan can be refused on the basis of the fact that an applicant belongs to a reference group, e.g. having a certain kind of job, which is the information subject of a nondistributive profile of a bad debtor, whereas the applicant himself is in fact an extremely trustworthy person who*

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[30] Bart Schermer, "Risks of Profiling and the Limits of Data Protection Law", in *Discrimination and Privacy in the Information Society - Data Mining and Profiling in Large Databases*, ed. Bart Custers, Toon Calders, Bart Schermer, and Tal Zarsky (London: Springer, 2013), 138-139.

[31] Anton Vedder, "KDD: The challenge to individualism", *Ethics and Information Technology* 1 (1999): 277.

[32] Alessandro Mantelero, "Personal data for decisional purposes in the age of analytics: From an individual to a collective dimension of data protection", *Computer Law & Security Review* 32 (2016): 239-240.

[33] Alessandro Mantelero, "Personal data for decisional purposes in the age of analytics: From an individual to a collective dimension of data protection", 241. For more in-depth content on automated decisions and profiling, see WP29, "Guidelines on automated individual decision-making and profiling for the purposes of Regulation 2016/679", 17/EN, last revised and adopted in 2018.

has not missed an instalment on a loan in his whole life".[34] This example, which is not at all hypothetical, but a reality increasingly present nowadays with the intensification of profiling, and its use assisted by AI tools, brings us back to our discussion starting point.

Given the brief, but systematic, account of the kinds of exclusion/preference bias phenomena that come about from clustering, we consider that there are indeed similarities, but also disparities, between the way in which the concept of discrimination by association has been developed in EU case law, and the kind of negative impact that people suffer from being placed in groups with generalised characteristics that do not necessarily correspond to their individual attributes. In the original definition of discrimination by association, the element of reflexive, or heightened, pain is introduced to the extent that the person suffering the discrimination, and whose autonomy is diminished, is directly linked to the person belonging to a typically protected group. Moreover, the principle of non-discrimination itself requires a double check: i) a comparison of the relevant situations and ii) an analysis of the possible reasons for the differential treatment.[35] In this sense, Wachter, Mittelstadt and Brent also warn that with automated systems we are faced with a nature that cannot be disaggregated, and that "*without information regarding the scope of the system and the outputs or decisions received by other individuals, claimants will have difficulty defining a legitimate comparator group*".[36]

Alessandra Silveira, commenting on the insights presented by Wachter, Mittelstadt and Russel, explains that the "*legal protection offered by anti-discrimination legislation is challenged when AI systems, not humans, discriminate. Humans discriminate on the basis of negative attitudes (prejudices) sometimes unintentional (stereotypes) which signal victims when discrimination occurs. Compared to traditional forms of discrimination, the automated one is more abstract, subtle, intangible, and non-intuitive – it is harder to detect. The increasing use of learning algorithms disrupts the effectiveness of traditional legal procedures and remedies, designed for discriminations predominantly based on intuition – and for which the impact produced in the legal sphere of the person being discriminated is relevant.*"[37]

In this context, it is worth referring to the Proposal for a Regulation of the European Parliament and of the Council laying down harmonised rules on AI,[38] published in 2021, which discusses in its first part – Context of the Proposal – the need to address the opacity, complexity, bias, a certain degree of unpredictability and partially autonomous behaviour of certain AI systems in order to ensure their compatibility with fundamental rights and facilitate the application of legal rules.

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[34] Anton Vedder, "KDD: The challenge to individualism", 277.

[35] Mariana Canotilho, "Brevíssimos apontamentos sobre a não discriminação no Direito da União Europeia", 105.

[36] Sandra Wachter, Brent Mittelstadt and Chris Russel, "Why fairness cannot be automated: bridging the gap between EU non-discrimination law and AI", 12-13.

[37] See Alessandra Silveira, "Profiling and cybersecurity: a perspective from fundamental rights' protection in the EU", ed. Francisco Andrade, Joana Abreu and Pedro Freitas, *Legal developments on cybersecurity and related fields* (Springer International Publishing, forthcoming, made available by the Author), footnote 49. See also Sandra Wachter, Brent Mittelstadt and Chris Russel, "Why fairness cannot be automated: bridging the gap between EU non-discrimination law and AI".

[38] European Commission, Proposal for a Regulation of the European Parliament and of the Council laying down harmonised rules on Artificial Intelligence (Artificial Intelligence Act), Brussels, 21.4.2021, COM(2021) 206 final, 2021/0106(COD).

According to its Recital 17, "*AI systems providing social scoring of natural persons for general purpose (…) may lead to discriminatory outcomes and the exclusion of certain groups (…) [and] may violate the right to dignity and non-discrimination and the values of equality and justice. (…) The social score obtained from such AI systems may lead to (…) unfavourable treatment of natural persons or whole groups thereof in social contexts, which are unrelated to the context in which the data was originally generated or collected or to a detrimental treatment that is disproportionate or unjustified to the gravity of their social behaviour. Such AI systems should be therefore prohibited.*" In turn, its Recital 33 denotes that technical inaccuracies in AI systems intended for remote biometric identification of natural persons may lead to biased results and have discriminatory effects, and that this is especially relevant when it comes to age, ethnicity, gender, or disability. To that extent – and because they jeopardise a fundamental right –, "real time" and "post" remote biometric identification systems should be classified as high-risk, and human oversight is required.

Although this Proposal elaborately touches on the issue of non-discrimination and – as we ascertain in Recital quoted above – on the typical characteristics of legally protected groups, reflecting on the Proposal, Lilian Edwards emphasises that algorithmic systems construct new groups whose commonalities do not easily fall within the existing rules on discrimination and protected characteristics. Moreover, the author adds that "*an ex ante impact assessment and/or post-factum audit should, not only, more comprehensively take account of fundamental rights, but also move beyond fundamental rights to scrutinise other important risks and impacts*", meaning that it should also integrate "*risks to groups and communities; individual and structural discrimination caused by contexts of deployment; environmental impacts; effectiveness; transparency; contestability; and the views and wishes of end users and affected communities.*" [39]

Considering the issues we raise here, one should highlight that society is being faced with new frameworks, which require new frames of reference, as Beck had already suggested. In this new world, we are now confronted with algorithmic discrimination, which "*does not need to follow these familiar patterns of discrimination. Nor does it need to differentiate people according to perceived human traits or legally protected characteristics. New forms of algorithmic discrimination are increasingly subtle and difficult to detect and may have no basis in law or case law, which means that the judiciary has not yet developed proven methods to detect and assess these new types of discrimination.*"[40]

Indeed, affinity profiling, defined as "*grouping people according to their assumed interests rather than solely their personal traits*"[41] – which is what we are considering in this text – points us towards this idea of individual autonomy being impacted and possible unfavourable treatment, which occurs because people are placed in groups on the basis of probabilities and due to data inference, and possibilities may be taken away from them that would otherwise be open to them. However, this is something that is at first sight hardly comprehensible. Indeed, something that scholars emphasise is the consequence of excessive personalisation, namely the "*filter bubble*": an information sphere tailored to each individual. We are thus led,

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[39] Lilian Edwards, "Regulating AI in Europe: four problems and four solutions", *Ada Lovelace Institute*, accessed June 29, 2023, https://www.adalovelaceinstitute.org/report/regulating-ai-in-europe/, 15.

[40] Sandra Wachter, Brent Mittelstadt and Chris Russel, "Why fairness cannot be automated: bridging the gap between EU non-discrimination law and AI", 67.

[41] Sandra Wachter, "Affinity Profiling and discrimination by association in online behavioral advertising".

every day, to make choices based on personalised ads, content, and services.[42] The question arises to what extent this can be seen as a violation of personal autonomy, since we are left with a distorted view of what appears to be endless and neutral information about the world at our fingertips.

In the context of assessment of individuals' privacy and monitoring phenomena, Nissenbaum makes the case that when we evaluate the sharing of information with third-party data users, it is important to know something about these parties, such as their social roles, their ability to affect the lives of data subjects, and their intentions towards data subjects, as well as to ask the question whether the practice of information disclosure under consideration harms subjects, interferes with their self-determination, or amplifies undesirable inequalities in status, power, and wealth.[43] Furthermore, as stated by Bernd Stahl *et al.*, currently few organisations are not required to disclose their systems and their future use, hence communities and governments rely on information provided by journalists, researchers and public records requests. However, transparency between AI technology and its users is crucial and that can be fostered by government bodies and auditors.[44]

Final remarks

The automated and digital context we live in forces us to rethink the scope of application of legal principles, that is, what they protect and what they forbid. Bearing this in mind, we would like to highlight that the concept of discrimination by association definitely sheds light on the importance of the development of anti-discrimination policy in the EU but does not provide a full account of the issues we raise here, which are increasingly relevant in the face of fast-paced technological development.

On the one hand, it seems to us to be a concept that could be applied to the context of affinity profiling and the unfavourable treatment it can lead to, as well as diminished autonomy, since it contributes to the increase of inequality insofar as people's possibilities are reduced. In fact, when it comes to online price discrimination, a topic we covered briefly earlier, this can contribute to certain people being targeted to pay a higher price for certain products because their record shows a high consumption pattern, which would not happen if they were not subject to profiling and online behavioural advertisement.

On the other hand, it also falls outside the scope of what has been, so far, understood as discrimination. There may be no legally protected group involved – elements like ethnic origin, religious belief, age, disability, and sexual orientation may not even be at play, and if they are, at least, they cannot be grasped in an obvious or intuitive way. So, is there room for considering this phenomenon as discrimination by association, or to develop the concept to encompass these new events? These uncertainties require further clarification.

One thing is for certain: targeting and profiling phenomena do challenge personal autonomy, contribute to eroding individuality and can pose challenges

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[42] Frederik Zuiderveen Borgesius, "Behavioural sciences and the regulation of privacy on the internet", *Amsterdam Law School Legal Studies*, Research Paper 54 (2014): 6.

[43] Helen Nissenbaum, "Privacy as contextual integrity", 79 *Washington Law Review Association* 119 (2004): 155. Accessed April 22, 2023, https://digitalcommons.law.uw.edu/wlr/vol79/iss1/10.

[44] Bernd Carsten Stahl, *et al.*, "A systematic review of artificial intelligence impact assessments", *Artificial Intelligence Review,* Springer (2023): 16. DOI: https://doi.org/10.1007/s10462-023-10420-8.

to the protection of fundamental rights. Moreover, we show concern about these clustering procedures at the present time, as there is no explicit and clear access to how categorisations and inferences are carried out with the assistance of AI tools, which easily handle many variables, and consequently, there is a significant impediment for individuals to challenge these types of practices.