

# Rethinking Decisions under Article 22 of the GDPR: Implications for Semi-Automated Legal Decision-Making

Peter Alexander Earls Davis<sup>1</sup>, Sebastian Felix Schwemer<sup>1,2</sup>

<sup>1</sup>Centre for Information and Innovation Law (CIIR), University of Copenhagen

<sup>2</sup>Norwegian Research Center for Computers and Law (NRCCL), University of Oslo

## Abstract

This paper examines the implications of Article 22 of the General Data Protection Regulation (GDPR) for legal tech tools that involve semi-automated decision-making. The authors focus on the interpretation of the term 'decision' within the provision and argue that it should be construed broadly to include recommendations or other measures leading to a particular outcome for an individual. The implications of this interpretation for legal artificial intelligence (AI) and intelligent assistance (IA) are briefly discussed, with potential increased responsibilities under the GDPR for entities that use these tools. The paper concludes by calling for further examination of the 'locating decisions' problem in the context of AI and IA systems.

## Keywords

Automated decision-making, Article 22 GDPR, Human Oversight, Compliance

## 1. Introduction

Public and private entities increasingly rely on automated tools to make better and more efficient decisions and effectively augment human capabilities. Concomitantly, lawmakers around the world and especially in the European Union ('EU') have focused considerable attention on addressing issues posed by increased automation in society further fuelled by recent technological advances, such as large-language models ('LLMs') including ChatGPT. These novel instruments, such as the proposed Artificial Intelligence Act<sup>1</sup> will invariably impact legal automated decision making ('ADM') and legal artificial intelligence ('AI') and intelligent assistance ('IA') in a variety of ways.

In this paper, instead, we turn to a well-known instrument – the European Union's General Data Protection Regulation ('GDPR')<sup>2</sup> – with a somewhat overlooked but central question. Automated tools used in legal decision making often process personal data, meaning that data protection rules are relevant in assessing the lawfulness

of automated decision-making. The GDPR imposes a variety of obligations on entities that process personal data (i.e. controllers and processors<sup>3</sup>), including specific rules for certain forms of ADM.

This paper focuses on a single provision that is central to the automation or intelligent assistance in legal decision-making settings: Article 22 of the GDPR, and its application to AI-driven tools that purport to guide an eventual human decision-maker to an accurate and consistent decision more quickly. Article 22 is headed 'Automated individual decision-making, including profiling'. Its key subsection for the purposes of this paper, Article 22(1), reads as follows:

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.

Article 22 entails '[a]dditional safeguards and restrictions'<sup>4</sup> for activities that fall within its ambit. However, the provision is lengthy and cumbersome, making its proper interpretation difficult and thus particularly challenging for those developing legal tech tools. Its various

In: *Proceedings of the Third International Workshop on Artificial Intelligence and Intelligent Assistance for Legal Professionals in the Digital Workplace (LegalAIIA 2023)*, held in conjunction with ICAIL 2023, June 19, 2023, Braga, Portugal.

✉ pead@jur.ku.dk (P. A. E. Davis);

sebastian.felix.schwemer@jur.ku.dk (S. F. Schwemer)

🆔 0000-0001-7442-1930 (P. A. E. Davis); 0000-0003-4326-9328

(S. F. Schwemer)

© 2023 Copyright for this paper by its authors. Use permitted under Creative Commons License Attribution 4.0 International (CC BY 4.0).

CEUR Workshop Proceedings (CEUR-WS.org)

<sup>1</sup>Proposal for a Regulation of the European Parliament and of the Council laying down harmonised rules on Artificial Intelligence (Artificial Intelligence Act) and amending certain Union legislative acts, Brussels, 21.4.2021, COM/2021/206 final.

<sup>2</sup>Regulation (EU) 2016/679 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) [2016] OJ L 119/1.

<sup>3</sup>GDPR, Arts. 4(7) 4(8).

<sup>4</sup>Article 29 Working Party ('A29WP'), 'Guidelines on Automated Individual Decision-Making and Profiling for the Purposes of Regulation 2016/679' (WP 251rev.01, as last revised and adopted on 6 February 2018), 9. Note that WP251 was endorsed by the European Data Protection Board ('EDPB'): EDPB, Endorsement 1/2018 (25 May 2018) (endorsing the WP29's Guidelines on Automated Individual Decision-Making and Profiling for the Purposes of Regulation 2016/679). This document will hereinafter be referred to as 'WP251', by the A29WP/EDBP, to recognise its conception by the former and adoption by the latter.

components have been the subject of intense scrutiny by academics [1][2][3][4][5][6][7] and, more recently, the provision has seen action before the Court of Justice of the European Union (‘CJEU’) in the upcoming Case C-634/21 *SCHUFA Holding and Others*<sup>5</sup> that promises to settle at least some of the interpretive confusion. As of writing, the Advocate General (‘AG’), Pikamäe, has handed down her Opinion in the case, which is often – but not always – indicative of the CJEU’s final reasoning [8][9].

One aspect of the provision that warrants more thorough examination in the context of legal AI and legal IA – especially before the CJEU hands down its judgment in *SCHUFA* – is the word ‘decision’. Conceptualising precisely what a ‘decision’ entails is especially pertinent for automated tools that help to inform an ultimate, final ‘decision’ by a human decision-maker – a common task that emerging legal technologies are designed to carry out. The legal question is whether the actions, or results, of such automated processing operations are to be properly considered as ‘decisions’ in themselves (in addition to the ultimate, human, decision). If the answer is in the affirmative, entities that use these automated tools are liable to increased responsibilities under the GDPR than otherwise.

This ‘locating decisions’ problem – as coined by Binns and Veale [10] – is yet to be considered robustly in the literature.<sup>6</sup> This is despite the considerable debate on Article 22 more broadly, and Bygrave [11] pointing to the difficulties of ‘distinguishing decisions from other processes’ in 2001 under the GDPR’s precursor from 1995, the Data Protection Directive (‘DPD’<sup>7</sup>). The A29WP/EDPB gave terse – and, as this paper argues, misleading – guidance on this point in WP251.

Legal decision-making can involve various degrees of automation [12]. Large scale content moderation decisions by online platforms, for example, are regularly fully automated; i.e. the question of whether a specific piece of information is lawful or not is decided by algorithmic systems [13][14]. Regularly, however, only parts of a complex legal decision-making process are automated because full automation may be neither feasible under the current state-of-the-art nor desirable in certain ADM scenarios [15]. To concretise the analysis herein, focus is had on an example of an automated tool that is intended to assist a human decision-maker. The tool in question, dubbed ‘LEGALESE’, is a ‘legal tech’ information retrieval application that uses natural language

processing (‘NLP’), a subset of machine learning (‘ML’), for legal information retrieval. LEGALESE may be used, *inter alia*, to assist a public service worker to reach a decision about an individual (such as whether they should receive a particular welfare benefit), based on previous similar cases. In this way, LEGALESE endeavours to make decision-making efficient, consistent, and accurate. Critical to the application of Article 22(1) in this instance is whether LEGALESE is making a *decision* when used, or another form of output which is better categorised as a *recommendation* or similar – with a *decision* only taking place through the eventual human decision-maker.

The paper proceeds as follows. First, the statutory complex surrounding, and the logic behind, Article 22 is discussed. This discussion informs the following section, which examines where precisely a ‘decision’ is made. It is concluded that the term ‘decision’ should be interpreted broadly, so as to include recommendations or other measures that lead to a particular result for an individual. The implications of this finding in the context of legal AI or IA systems are briefly discussed in the final section, which also functions as the conclusion.

## 2. Logic and Mechanics of Article 22 of the GDPR

It is worth remarking at the outset that the GDPR’s primary *raison d’être* is to lay down rules regarding personal data protection,<sup>8</sup> and to protect the fundamental rights of individuals in this regard (‘in particular the right to the protection of personal data’).<sup>9</sup> Whilst the GDPR does directly regulate ADM and its potential harms, it only does so to the extent that the processing of personal data is involved. This means that ADM tools that do not require the use of personal data (e.g. certain ADM tools used for industrial purposes) are not captured by the GDPR or its Article 22. It also means that a data controller leveraging ADM tools that *do* process personal data must, in principle, comply with the GDPR’s many other requirements for that processing<sup>10</sup> (e.g. lawful basis and basic data protection principles), regardless of whether the impugned processing activities fall within the scope of Article 22.

Article 22 has been unpacked by the many others that have discussed its various components.<sup>11</sup> It being unnecessary to cover ground well-trodden, the following high-level remarks can be made about its logic and mechanics that are important for providing context to this paper:

- **Exceptions and derogations:** Whilst Article 22(1) purports to restrict certain forms of ADM,

<sup>5</sup>Hereinafter *SCHUFA*.

<sup>6</sup>Binns and Veale (*ibid*) provide helpful context for the problem, but do not endeavour to solve it, remarking that ‘there seem no easy answers to this quandary in case law or regulatory guidance’.

<sup>7</sup>Directive 95/46/EC on the protection of individuals with regard to the processing of personal data and on the free movement of such data [1995] OJ L 281/31.

<sup>8</sup>GDPR, Art. 1(1).

<sup>9</sup>GDPR, Art. 1(2).

<sup>10</sup>On this point, see further WP251 (n 3), 9-19; [6].

<sup>11</sup>For a summary, see [5].

it is ‘heavily encumbered by qualifications’ [16]. Per Article 22(2), the right not to be subject to ADM enshrined in Article 22(1) does not apply if (a) ADM is necessary for the performance or entering into a contract; (b) a Member State law allows the ADM concerned; or (c) the data subject explicitly consents to it.

Moreover, Article 22(1) only applies to automated decisions with relatively serious consequences; i.e. those that ‘produce legal effects concerning him or her or similarly significantly affects him or her’.<sup>12</sup> ADM that has a trivial impact on an individual are not restricted by Article 22(1).<sup>13</sup> Many legal AI/IA use cases, on the other hand, might require a detailed analysis of what whether they produce such legal effect.

Finally, Article 22(1) applies to ‘a decision based solely on automated processing’ (emphasis added). Ostensibly, this means that the restrictions in Article 22(1) do not apply where there exists human involvement in a decision – such as where a computer simply recommends a course of action, or gives a score for a human decision maker to apply to a situation (e.g. credit history, employability, visa eligibility). This conclusion, however, is challenged in this paper as overly simplistic.

- **Right vs prohibition:** It is unsettled whether Article 22(1) establishes a *prima facie* prohibition on ADM, or is a right able to be exercised by data subjects. If the former, a controller may seek to overcome the generalised prohibition through one of the exceptions in Article 22(2), such as consent. If the latter, the data subject must proactively exercise their right by, for example, demanding that a decision is made through non-automated means. And, whilst Tosoni [1] cogently lays out a case for the former, AG Pikamäe in *SCHUFA* endorses the latter.<sup>14</sup> If the CJEU follows the approach of the AG in this respect, Article 22 will likely present a greater thorn in the side of data controllers using ADM technologies than otherwise.
- **Decision vs automated processing:** According to its plain wording, Article 22(1) applies to decisions *based* on automated processing, including profiling. This means that a *decision* is not necessarily to be treated the same as ‘the *processing* that leads to it’ [1]. For example, a bank’s decision not to allow a financial transaction to proceed may be

treated as distinct from anti-money laundering monitoring process that preceded the decision.

- **Automated processing and profiling:** Profiling is defined at Article 4(4) as ‘...any form of automated processing of personal data consisting of the use of personal data to evaluate certain personal aspects relating to a natural person...’. In practice, automated decisions captured by Article 22(1) are likely to involve some kind of profiling [17]. However, in principle, other forms of automated processing of personal data may also lead to a decision within the scope of Article 22.
- **Right to explanation:** The existence of a right to explanation of ADM under the GDPR has been a subject of academic discourse [2], due to its lack of explicit provision in Article 22 (the accompanying Recital 71, however, does indicate such a right exists). Nonetheless, the overwhelming weight of academic ([5][16][18][19]) and stakeholder (notably WP251) commentary concludes that such a right does exist. Whilst explainability is not a direct focus of this paper, it is worthwhile noting this aspect of Article 22, since a broader interpretation of ‘decision’ leads to a concomitant increase in the amount of ‘decisions’ that data controllers are liable to explain (assuming, of course, that such a right does exist).

With these broad remarks in mind, it is helpful to return to one of the observations made above. That pertains to the word *solely*, which denotes that even *any* human influence on the decision would preclude the application of Article 22(1). This has led to several commentators [20][2][11], including the A29WP/EDPB in WP251, to conclude that Article 22(1) is able to be circumvented by involving a human decision maker – i.e. a human-in-the-loop [21][22] – with some degree of discretion over the final decision. The only instance that this arrangement would be insufficient, according to the A29WP/EDPB, is where human ‘oversight of the decision is ... just a token gesture’<sup>15</sup>, or in other words, where humans effectively ‘rubber-stamp’ [10] decisions made by a computer.

Whilst this conclusion is convenient, it is – potentially – problematic, for at least two related reasons. First, it implicitly presupposes a simple and linear relationship between the automated processing and eventual decision. In analysing this problem, Binns and Veale [10] explain that ‘human intervention and/or a decision’s significance can be stratified by stages or by particular decision outcomes.’<sup>16</sup> The authors refer to these instances as

<sup>12</sup>This is discussed below.

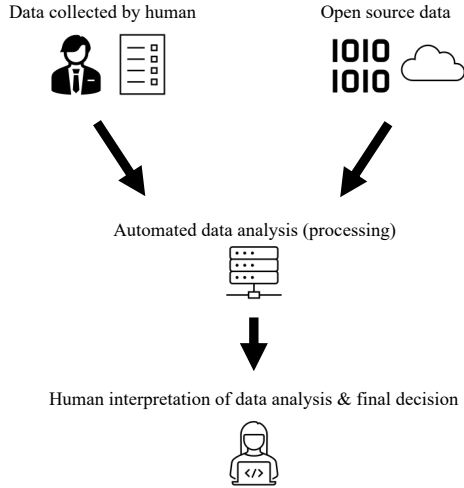
<sup>13</sup>WP251 suggests that most forms of online targeted advertising, as one example, would not fall within Article 22(1) for this reason; WP251 (n 3), 22.

<sup>14</sup>SCHUFA, para. 31.

<sup>15</sup>WP251 (n 3), 21.

<sup>16</sup>Bygrave [5] also notes the possibility that a decision may be ‘an interim action in a broader process potentially involving multiple decisions’.

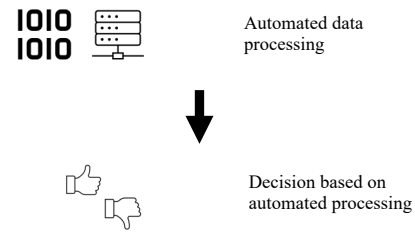
‘multi-stage profiling systems’, as distinct from ‘single-step automated decision-making’. For the benefit of clarity, examples of these two scenarios are depicted in the diagrams below (Figure 1 and Figure 2).



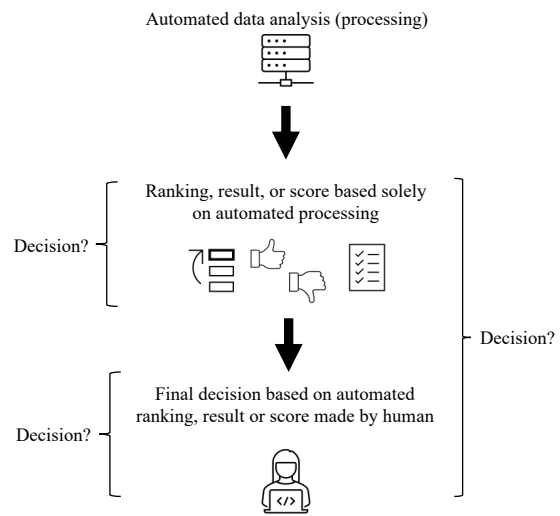
**Figure 1:** The decision tree illustrates a variety of automated and non-automated steps that lead to a final decision.

The second, related, problem with the ‘convenient’ conclusion above is that it assumes the relevant ‘decision’ for the purposes of Article 22(1) is always the final decision. Put differently, the above interpretation implies that, in a decision-making complex, a final ‘decision’ (that may have human input) cannot be preceded by one or more other ‘decisions’ that are based solely on automated processing.

As alluded to in the introduction, the relevance of other preliminary ‘decisions’, such as those depicted in Figure 3, has been under-appreciated and under-studied in the literature. On a purely textual analysis, there is no immediate reason to conclude that the only relevant ‘decision’ for Article 22(1) purposes is the final decision. The following section examines whether, on the proper construction of the provision, the conventional wisdom should prevail. Or, alternatively, that Article 22(1) should be interpreted broadly so as to include a broad range of ‘decisions’, including those that are merely a necessary step towards an eventual, final decision.



**Figure 2:** The decision tree depicts a single-step ADM process with no human involvement.



**Figure 3:** The decision tree illustrates a variety of steps, which might be regarded as ‘decisions’, and a final decision made by a human decision-maker.

### 3. What’s in a Decision?

‘Decision’ is not a defined term in the GDPR; nor is it a term with a generally applicable definition in EU law.<sup>17</sup> Therefore, in interpreting what a ‘decision’ entails, one must abide by the canons of statutory interpretation laid out by the CJEU [23].

<sup>17</sup>Whilst an official ‘decision’ by an EU institution is an established concept under Article 288 of the Treaty on the Functioning of the European Union, this is clearly distinct from the type of ‘decision’ envisioned in the GDPR. See *SCHUFA*, para. 37. See also [5].

### 3.1. Textual Interpretation

From a purely textual perspective, Bygrave [11] remarks that ‘it is fairly obvious that making a decision about an individual person ordinarily involves the adoption of a particular attitude, opinion or stance towards that person.’ This kind of activity is distinct, according to Bygrave [5], ‘from other stages that prepare, support, complement or head off decision making’. AG Pikamäe in *SCHUFA* refers to, and appears to endorse, Bygrave’s remarks,<sup>18</sup> which provide a sound point of departure from a textual sense, but far from conclusively establish a firm meaning of the term.

### 3.2. Systematic and Teleological Interpretation

Given the possibility for ambiguity in the meaning of the term, one must look beyond the (English version<sup>19</sup>) text, and towards its context (i.e. a systematic interpretation) and purpose (i.e. ‘telos’) in light of the instrument as a whole. AG Pikamäe in *SCHUFA* notes that, given the legislature chose not to define the term, it is possible to deduce that the EU legislature intended a broad interpretation of the term. Unfortunately, the AG declined to refer to authority for this assertion;<sup>20</sup> but justification is forthcoming through a systematic and teleological interpretation of the provision.

For one, Recital 71 indicates that the legislature did not intend an overly formalistic interpretation of ‘decision’:

The data subject should have the right not to be subject to a decision, which may include a measure, evaluating personal aspects relating to him or her which is based solely on automated processing and which produces legal effects concerning him or her or similarly significantly affects him or her, such as automatic refusal of an online credit application or e-recruiting practices without any human intervention.

The inclusion of a ‘measure’, and listing of non-exhaustive examples that extend beyond formal decision-making (e.g. as made in an official proceeding, such as

a tribunal or court<sup>21</sup>), are indicative of an intention for ‘decision’ to be interpreted broadly.

Further, from a teleological perspective, the GDPR is concerned, *inter alia*, with the protection of fundamental rights, especially the right to protection of personal data.<sup>22</sup> These rights are liable to erosion [25] by public and private actors that use personal data to feed different types of ADM processes. Article 22 is designed to mitigate against such outcomes – an overly restrictive interpretation of ‘decision’ runs counter to that goal. From a consequentialist perspective, it seems absurd to allow entities to use ADM, so long as there is a ‘human in the loop’ somewhere in the decision-making process – even if the human involvement is inconsequential in practice.

Moreover, as put by the President of the CJEU, (co-)writing extra-judicially, the court ‘must, as far as possible, interpret the law with a view to filling any normative lacunae, either in primary or secondary EU law, whose persistence would “lead to a result contrary both to the spirit of the Treaty ... and to its system.”’<sup>23</sup> The *solely* automated criterion, as mentioned above, has been referred to by commentators as a ‘legal loophole’. So far as this loophole is able to be closed through a broad interpretation of the term ‘decision’, the CJEU would be likely to adopt such an interpretation, thereby also increasing legal certainty when employing AI or IA systems in legal decision-making.

Finally, from an empirical perspective, the CJEU has been (arguably) near-continuously prepared to interpret the provisions of the GDPR and its predecessor, the DPD, in a manner that privileges the protection of data protection rights over, for instance, business or public security interests [26]. There is little to suggest that the CJEU would resile from this approach in the context of ADM.

### 3.3. Counterarguments to an Expansive Interpretation

The obvious counterargument to the above is that it renders the term ‘solely’ in Article 22(1) superfluous. It is interpretive dogma – in the EU and beyond<sup>24</sup> – that the judiciary should strive to give meaning to each term in a written law due to the presumed rationality of the legislator. Why include the ‘decision based solely on automated processing’ criterion, only to allow Article 22(1)

<sup>18</sup>*SCHUFA*, para. 37.

<sup>19</sup>In principle, all official languages are equally relevant from an interpretive perspective, see [23].

<sup>20</sup>Bygrave [11] makes a similar remark in his 2001 work analysing Article 22 of the GDPR’s precursor, in Article 15 of the DPD: ‘the notion of decision in Art. 15(1) is undoubtedly to be construed broadly and somewhat loosely in light of the provision’s rationale and its otherwise detailed qualification of the type of decision it embraces.’

<sup>21</sup>Compare in the context of legal high risk AI systems in the AI Act and judicial authority Schwemer et al. [24].

<sup>22</sup>*SCHUFA*, para. 48.

<sup>23</sup>[23], citing Case 294/83, *Les Veils v. Parliament*, 1986 E.C.R. 1357, para. 25.

<sup>24</sup>E.g. *Market Co. v. Hoffman*, 101 U. S. 112, 115 (1879) (“As early as in Bacon’s Abridgment, sect. 2, it was said that ‘a statute ought, upon the whole, to be so construed that, if it can be prevented, no clause, sentence, or word shall be superfluous, void, or insignificant’”).



to nonetheless apply where there is meaningful human involvement?

In reply, it is contended that the interpretation advanced in this paper remains in observance of this principle. A decision with human input continues to fall outside the scope of Article 22(1). What differs is that the ‘decision’ is able to be located elsewhere than the final, human decision. Therefore, a decision with human input might be preceded by decisions that are solely made through automated processing. Figure 3 above provides an illustration of an example.

The proposition that computers can make decisions as a precursor to further, human, decisions is plainly uncontroversial from a textual or contextual perspective. From a consequentialist-teleological perspective [23], this approach maintains the balance that the GDPR is designed to strike. To reiterate an earlier observation, as a data protection instrument, the (often discretionary) decision-making process of humans is not within the remit of the GDPR. However, the processing of personal data, which may create or impact decisions, is. As Bygrave notes, one of the ‘fears’ that underpinned the drafting of Article 15(1) of the DPD, the precursor to Article 22(1) GDPR, was ‘that the increasing automatisisation of decision-making processes engenders automatic acceptance of the validity of the decisions reached and a concomitant reduction in the investigatory and decisional responsibilities of humans’ [11], i.e. propagating automation bias.<sup>25</sup> Bygrave points to the Commission’s commentary in this regard:

The danger of the misuse of data processing in decision-making may become a major problem in future: the result produced by the machine, using more and more sophisticated software, and even expert systems, has an apparently objective and incontrovertible character to which a human decision-maker may attach too much weight, thus abdicating his own responsibilities.<sup>26</sup>

The interpretation of Article 22(1) advanced in this paper ensures that the ‘result produced by the machine’ is scrutinisable – so long as it ‘produces legal effects concerning ... or similarly significantly affects’ the data subject. Likewise, it ensures that human contributions to an ultimate decision are not covered by the provision.

<sup>25</sup>In the context of the proposed AI Act, e.g., referred to the ‘possible tendency of automatically relying or over-relying on the output’, Article 14(4) lit. b.

<sup>26</sup>Amended proposal for a Council Directive on the protection of individuals with regard to the processing of personal data and on the free movement of such data COM(92) 422 final – SYN 287, 15.10.1992, 26.

### 3.4. ‘Meaningful’ Human Oversight?

As an added benefit, the interpretive approach suggested in this paper solves a further interpretive dilemma. It was earlier stated that the A29WP/EDPB, in WP251, regarded that ‘token’ human involvement was insufficient to render the decision ‘solely’ made by automated processing. The full relevant passage is as follows:

To qualify as human involvement, the controller must ensure that any oversight of the decision is meaningful, rather than just a token gesture. It should be carried out by someone who has the authority and competence to change the decision. As part of the analysis, they should consider all the relevant data.<sup>27</sup>

In other words, according to this perspective, human involvement in the context of Article 22 needs to take place in the operation of the ADM in a ‘meaningful’ way. This is notably also different to many other human-in-the-loop provisions in secondary EU legislation, e.g., in relation to content moderation where human involvement is only required in the redress phase of ADM [14]. On the other hand, the EU’s proposed AI Act requires ‘appropriate’ human oversight measures [24][27].

In the context of Article 22, in any case, there is no interpretive justification for this stance given by the A29WP/EDPB. The stipulation merely adds a further ambiguous step to Article 22 compliance – that data controllers must consider when human involvement is ‘meaningful’ in a decision aided by automated processing.

A broad interpretation of ‘decision’ circumvents the need for this additional step – i.e. the assessment of meaningfulness – to an already confounding provision. Where there is a human in the loop, the point of enquiry for the application of Article 22(1) is not the ‘meaningfulness’ of the human input, but the extent to which the decision made by solely automated processing ‘produces legal effects concerning ... or similarly significantly affects’ the data subject. If human input is meagre, or functionally non-existent, then the contribution to the data subject’s position by the automated processing is concomitantly larger. This conclusion is elaborated further below, when examining the consequences of the interpretation advanced herein.

## 4. Consequences of a Broad Interpretation of ‘Decision’ for Legal AI/IA

Despite, according to this paper, the phrase ‘a decision based solely on automated processing’ encompassing

<sup>27</sup>WP251, 21.

more types of ADM than conventional wisdom suggests, the scope of Article 22(1) remains subject to other constraints. This includes the ‘legal effects... or similarly significantly affects’ criterion.

Indeed, this is likely to be the key threshold question that entities using ADM must ask when considering the potential application of Article 22(1). Put differently, the key point of enquiry that an entity leveraging personal data-fuelled ADM processes is not whether a decision has been made, or whether a human’s involvement has been ‘meaningful’. Rather, data controllers must look to the practical effect of the purely automated decisions – broadly defined – and their impact on data subjects.

Such a conclusion is similarly reached by AG Pikamäe in *SCHUFA*, who writes that ‘[t]he decisive factor is the effect that the “decision” has on the person concerned.’<sup>28</sup> Where a human is ‘in the loop’, an entity leveraging ADM must also consider whether other preliminary, fully-automated stages might, in themselves, produce legal effects or similarly significantly affects data subjects. In *SCHUFA*, AG Pikamäe ultimately opined that the automated calculation of a credit score could comprise a ‘decision’ for the purposes of Article 22(1). This was despite the eventual, final decision to lend credit having human input that could reasonably be categorised as ‘meaningful’. A translation of the relevant passage is as follows:

The decisive factor is the effect that the “decision” has on the person concerned. Since a negative [credit] score can, on its own, produce unfavourable effects for the person concerned, namely significantly limiting him in the exercise of his freedoms, or even stigmatizing him in society, it seems justified to qualify it as a “decision” in the sense of the aforementioned provision [i.e. Article 22(1)] when a financial institution gives it paramount importance in their decision-making procedure. Indeed, in such circumstances, the credit applicant is affected from the stage of the assessment of his credit by the credit check company and not only at the final stage of the refusal of the credit, in which the financial institution does not apply the result of this evaluation to the specific case.<sup>29</sup>

One need not think hard to imagine other types of scoring, ranking, or human decision-assistance processes with similar effect. The Amsterdam Court of Appeals, for instance, recently ruled that automated processing that presaged the firing of Uber and Ola drivers similarly

<sup>28</sup>*SCHUFA*, para. 43 (translated from French).

<sup>29</sup>*SCHUFA*, para. 43 (translation from French).

fell within the scope of Article 22(1).<sup>30</sup> Anti-money laundering, job applications, welfare applications, and visa or citizenship applications, to name a few, are amongst those processes that increasingly rely on the assistance of automated data processing tools to increase efficiency and accuracy, despite human involvement. As this paper surmises, those might fall within Article 22(1) notwithstanding the ‘solely automated’ criterion. Data controllers using such tools should be aware of potential legal obligations in this regard.

Many legal AI/IA systems are designed to empower a human decision-maker to make better, more accurate decisions, more efficiently. Those using nascent, legal technologies like these should be particularly attuned to the possibility that Article 22(1) applies in these instances. That is because the use of legal technologies are particularly liable, by their very nature and the specific context in which they are used, to ‘produce *legal effects*’ on data subjects. Whilst this aspect of Article 22(1) is outside the scope of this paper, it is worthwhile mentioning the A29WP/EDPB guidance in WP251 on point:

A legal effect requires that the decision, which is based on solely automated processing, affects someone’s legal rights, such as the freedom to associate with others, vote in an election, or take legal action. A legal effect may also be something that affects a person’s legal status or their rights under a contract. Examples of this type of effect include automated decisions about an individual that result in:

- cancellation of a contract;
- entitlement to or denial of a particular social benefit granted by law, such as child or housing benefit;
- refused admission to a country or denial of citizenship.<sup>31</sup>

## 5. Conclusion

The conclusions reached in this paper have implications for those leveraging ADM more broadly, but perhaps especially those developing, or leveraging, AI/IA ADM processes in legal technologies. Put simply, it is insufficient to place a human in the loop to alleviate compliance burdens in the context of the GDPR’s ADM-focused Article 22. Those leveraging ADM systems are unlikely to

<sup>30</sup>Amsterdam Court of Appeals ECLI:NL:GHAMS:2023:793; ECLI:NL:GHAMS:2023:796; ECLI:NL:GHAMS:2023:804.

For an English summary of the cases, see <https://www.workerinfoexchange.org/post/historic-digital-rights-win-for-wie-and-the-adcu-over-uber-and-ola-at-amsterdam-court-of-appeal>.

<sup>31</sup>WP251, 21.

be thrilled with AG Pikamäe’s remarks that Article 22’s application ‘depends on the circumstances of each particular case.’<sup>32</sup> This sentiment echoes others who have remarked that the GDPR is ill-suited to rigid, checkbox-style compliance.

Nevertheless, as potential landmark case, the forthcoming *SCHUFA* judgment promises to bring some legal certainty for the legal AI and IA community on the intersection of ADM and data protection. This significant development, coupled with other notable political advancements in the EU, particularly the AI Act, will continue to keep European legal experts occupied as they further delve into the intricate legal ramifications of ADM.

## Acknowledgments

This research is part of the Legales project at the University of Copenhagen, co-financed by the Innovation Fund Denmark (grant agreement: 0175-00011A). We thank Luca Tosoni for inspiring discussions. All remaining errors are our own.

## References

- [1] L. Tosoni, The right to object to automated individual decisions: resolving the ambiguity of Article 22 (1) of the General Data Protection Regulation, *International Data Privacy Law* 11 (2021) 145–162.
- [2] S. Wachter, B. Mittelstadt, L. Floridi, Why a right to explanation of automated decision-making does not exist in the General Data Protection Regulation, *International Data Privacy Law* 7 (2017) 76–99.
- [3] A. Selbst, J. Powles, “Meaningful information” and the right to explanation, in: *Conference on Fairness, Accountability and Transparency*, PMLR, 2018, pp. 48–48.
- [4] B. Goodman, S. Flaxman, European union regulations on algorithmic decision-making and a “right to explanation”, *AI magazine* 38 (2017) 50–57.
- [5] L. Bygrave, Article 22, in: C. Kuner, L. Bygrave, C. Docksey (Eds.), *The EU General Data Protection Regulation (GDPR)*, Oxford University Press, Oxford, 2020, pp. 522–542.
- [6] A. Tamo-Larrieux, Decision-making by machines: Is the ‘Law of Everything’ enough?, *Computer Law & Security Review* 41 (2021) 105541.
- [7] M. E. Kaminski, G. Malgieri, Algorithmic impact assessments under the GDPR: producing multi-layered explanations, *International Data Privacy Law* (2020) 19–28.
- [8] C. Arrebola, A. J. Mauricio, H. J. Portilla, An econometric analysis of the influence of the Advocate General on the Court of Justice of the European Union, *Cambridge International Law Journal* 5 (2016) 82–112.
- [9] T. Tridimas, The Court of Justice of the European Union, in: *Oxford Principles of European Law: Volume 1: The European Union Legal Order*, Oxford University Press, 2018.
- [10] R. Binns, M. Veale, Is that your final decision? Multi-stage profiling, selective effects, and Article 22 of the GDPR, *International Data Privacy Law* 11 (2021) 319–332.
- [11] L. A. Bygrave, Automated Profiling: Minding the Machine: Article 15 of the EC Data Protection Directive and Automated Profiling, *Computer Law & Security Review* 17 (2001) 17–24. doi:10.1016/S0267-3649(01)00104-2.
- [12] K. D. Ashley, *Artificial Intelligence and Legal Analytics: New Tools for Law Practice in the Digital Age*, Cambridge University Press, 2017.
- [13] R. Gorwa, R. Binns, C. Katzenbach, Algorithmic content moderation: Technical and political challenges in the automation of platform governance, *Big Data & Society* 7 (2020). doi:10.1177/2053951719897945.
- [14] T. Riis, S. F. Schwemer, Leaving the European Safe Harbor, Sailing towards Algorithmic Content Regulation, *Journal of Internet Law* 22 (2019) 1–21.
- [15] S. Deakin, C. Markou, *Is law computable?: Critical perspectives on law and artificial intelligence*, Bloomsbury Publishing, 2020.
- [16] L. A. Bygrave, *Minding the Machine v2.0: The EU General Data Protection Regulation and Automated Decision-Making*, in: *Algorithmic Regulation*, Oxford University Press, 2019. doi:10.1093/oso/9780198838494.003.0011.
- [17] M. Brkan, Do algorithms rule the world? Algorithmic decision-making and data protection in the framework of the GDPR and beyond, *International Journal of Law and Information Technology* 27 (2019) 91–121.
- [18] I. Mendoza, L. A. Bygrave, The right not to be subject to automated decisions based on profiling, *EU internet law: Regulation and enforcement* (2017) 77–98.
- [19] M. E. Kaminski, The right to explanation, explained, *Berkeley Technology Law Journal* 34 (2019) 189–218.
- [20] S. Wachter, B. Mittelstadt, A right to reasonable inferences: re-thinking data protection law in the age of big data and AI, *Colum. Bus. L. Rev.* (2019) 494.
- [21] F. M. Zanzotto, Human-in-the-loop artificial intelligence, *Journal of Artificial Intelligence Research* 64 (2019) 243–252.
- [22] R. Crootof, M. E. Kaminski, W. N. Price II, *Humans*

<sup>32</sup>SCHUFA, para. 40 (translated from French).



- in the loop, *Vanderbilt Law Review*, Forthcoming (2023).
- [23] K. Lenaerts, J. A. Gutiérrez-Fons, To say what the law of the EU is: methods of interpretation and the European Court of Justice, *Colum. J. Eur. L.* 20 (2013) 3.
- [24] S. F. Schwemer, L. Tomada, T. Pasini, Legal AI Systems in the EU's proposed Artificial Intelligence Act, in: *Proceedings of the Second International Workshop on AI and Intelligent Assistance for Legal Professionals in the Digital Workplace (LegalAIIA 2021)*, held in conjunction with ICAIL, 2021.
- [25] C. O'Neil, *Weapons of math destruction: How big data increases inequality and threatens democracy*, Crown, 2017.
- [26] N. Purtova, The law of everything. Broad concept of personal data and future of EU data protection law, *Law, Innovation and Technology* 10 (2018) 40–81.
- [27] M. Veale, F. Zuiderveen Borgesius, Demystifying the draft EU Artificial Intelligence Act—Analysing the good, the bad, and the unclear elements of the proposed approach, *Computer Law Review International* 22 (2021) 97–112.