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FAIRTUBE REVISITED: THE GDPR VIOLATIONS OF CONTENT CREATORS' PERSONAL DATA RIGHTS BY ALGORITHMIC DECISION-MAKING ON YOUTUBE

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ABSTRACT

This thesis assesses violations of YouTube content creators' personal data rights laid down by the General Personal Data Protection Regulation (GDPR) resulting from the algorithmic decision-making implemented by YouTube and seeks potential solutions to remedy the violations and practical means of their implementation on YouTube. To achieve the aim of the research, the author undertook the means of qualitative and quantitative research. Qualitative research utilized the methods of basic theoretical research, including collection of data via academic literature, case law, scientific books and relevant legislation as well as other sources such as web materials, reports, letters and videos, and one-on-one interview, where the author conducted interviews with several content creators and a representative of the FairTube Association. The quantitative research was conducted by means of a survey with open-ended questions addressed to the selected content creators. As a result of the research, several violations of the GDPR provisions related to automated decision-making operated by YouTube algorithmic systems were identified. The study proposes a number of solutions in line with the requirements set forth by the GDPR and the FairTube demands on the matter and demonstrates how the said solution may be incorporated in the current functional and operational structure of YouTube. However, although YouTube is taking slow steps towards compliance with the GDPR, it is uncertain whether the platform implements more efficient solutions and bring its algorithmic systems and processes of algorithmic decision-making to the standards laid down by the GDPR.

Keywords: automated decision-making, algorithmic system, YouTube, GDPR, personal data protection.

LIST OF ABBREVIATIONS

API – Application Programming Interface

DMCA – Digital Millennium Copyrights Act

ECJ – European Court of Justice

GDPR – General Data Protection Regulation

TFEU – Treaty on the Functioning of the European Union

INTRODUCTION

YouTube is one of the most famous and well-established video platforms known to the world. Having started as an entertainment platform for sharing and broadcasting videos, it has ever since transformed into a labour hub for thousands of content creators, otherwise known as YouTubers. Such transformation became possible due to the introduction of *Google AdSense:* a feature allowing content creators to earn revenue from advertisements placed on their videos. However, in the most recent years, YouTube has become the subject of major controversies as the platform implemented algorithmic systems to monitor video content for copyrighted and questionable material to stir up engagement. Due to the decisions taken by the said algorithmic systems, thousands of creators found themselves temporarily or even permanently stripped of monetization on their videos due to unspecified reasons while regular viewers began encountering controversially misleading and sometimes extremist content in their recommendations.

In 2017, the negative implications of the algorithmic decision-making on YouTube, among other reasons, caused YouTubers to form an EU-based trade union named the YouTubers Union. Two years later, the union launched the FairTube campaign aimed at advocating for YouTubers' labour rights as well as personal data rights pursuant to the General Data Protection Regulation (GDPR).[1] In 2019, the YouTubers Union addressed YouTube with the list of demands requiring the platform to comply with the provisions of the Regulation by disclosing categories and criteria that affect monetization and views, providing explanations of violations of the Advertiser-Friendly Content Guidelines if the video is found in breach of them, restricting the scope of automated decision-making in favour of human moderation and possibility to appeal decisions.

It has come to the author's attention that the challenges YouTubers face in the current system of content promotion and decision-making implemented by YouTube has sparked some academic

[1] 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), OJ L 119, 4.5.2016, p 1—88.

discussion about the employment status of YouTubers and its place within the EU legal framework. However, little to nothing is found on the matter of YouTube's non-compliance with the rights and principles laid down by GDPR and the manner YouTubers are affected by such noncompliance in a collective dimension. Additionally, while the academic literature provides plenty of material from the perspective of legal and computer science on the matter of the algorithmic systems and automated decision-making, there has been no attempt to apply the existing principles to operation, functionality, and decision-making process of YouTube algorithmic systems and their effect on YouTubers and their personal rights.

This thesis seeks to establish violations of YouTubers' personal data rights as data subjects under the GDPR as a result of the algorithmic decision-making on YouTube and seek potential solutions to the issue. To facilitate the aim of this thesis, the following research questions will be answered:

1. What is an algorithmic system and how does it interact with human actors? What algorithmic systems does YouTube deploy and what is the scale of their operation? How does automated or algorithmic decision-making relate to the rule of law and does it present a legal problem?

2. Where do content creators stand in the framework of the new models of employment? How does their employment status create challenges for the protection of their personal rights?

3. How are the FairTube demands connected to the GDPR? What GDPR provisions and rights does YouTube as data controller violate with regard to content creators as data subjects?

4. How does the GDPR define the legal framework for automated decision-making? What is the best interpretation for the relevant provisions and is there any evidence to support said interpretation in the text of the GDPR itself? How thoroughly does YouTube comply with relevant requirements on automated decision-making of the GDPR and what are the shortcomings of its compliance?

5. What are the available solutions to the identified shortcomings? How may YouTube implement these solutions?

6. Is there evidence to assume YouTube will address the shortcomings and implement the possible solutions to remedy the problem?

The main research methods of this thesis are qualitative. The author undertakes use the following methods of qualitative research to achieve the research aim:

1. Basic theoretical research: collecting data relevant to and necessary for carrying out adequate research via academic literature, case law, scientific books and relevant legislation, as well as other sources such as web materials, reports, letters and videos.
2. One-on-one interview: conducting interviews with the representative of the FairTube Association as well as several content creators of choice to achieve greater perception of the content creators' experience with the consequences of automated decisions as well as the union's current and future action plan regarding their demands.

Additionally, the author conducted quantitative research in the form of a survey. The survey consisted of several open-ended questions related to the research problem that were addressed to selected content creators. Both the interview and the survey questions are attached to this study in Appendix 1.

The body of the thesis consists of five chapters. Chapter 1 assesses the YouTube algorithmic systems with regard to their interaction with the human actors, the scale of operation, and their relevance to the rule of law. Chapter 2 evaluates the issue of automated decision-making through the lens of platform work, particularly by establishing a link between content creators, personal data and automated decision-making as well as defining the goals and demands of the FairTube campaign. Chapter 3 evaluates the legal framework concerning automated decision-making as laid down by the GDPR and identifies YouTube's non-compliance with relevant provisions, demonstrated by evidence provided by content creators via interviews and completing the survey. Chapter 4 explores a number of solutions to the identified problems and proposes the methods of their implementation in the existing YouTube systems and functionality. Finally, Chapter 5 discusses the future of algorithmic systems and algorithmic decision-making on YouTube, supplied by the commentary of the FairTube's representative.

It is important to note that the objective of this thesis is subject to some limitations. As indicated in the topic of the thesis, the author sought to address the violations of personal data protection rights related to YouTube's ill implementation of algorithmic or automated decision-making. While this thesis introduces the aspects of employment and labour law as well as copyright law, these fields of law do not constitute the main objective of the research and are mentioned as means of achieving the aim of the research.

1. YOUTUBE ALGORITHMIC SYSTEMS AND THEIR INTERACTION WITH CONTENT CREATORS

At the first glance, YouTube is nothing save a video repository. At least, such was the main purpose for which it was originally created: in its early days, YouTube positioned itself mostly as a platform for video sharing, serving as a 'middle man' between amateur video enthusiasts and viewers.[2] However, at a more thorough review, it becomes apparent that since the very beginning of its operation YouTube has been providing labour opportunities for those willing to turn their interest in video creation and sharing into profit. In 2006, Google implemented *AdSense* into YouTube's structure—a service allowing the advertisers to place ads on videos shared on YouTube and splitting the revenue between content creators and YouTube itself at a 55 to 45 percent ratio respectively.[3] Essentially, the implementation of this feature marked the beginning of content monetization that, respectively, allowed YouTubers to gain revenue from posting their content on the platform, causing the numbers of users monetizing their videos to have been growing exponentially ever since.[4] In addition, as the occupation of a YouTuber was becoming more mainstream, the possibility to maximise profits was enhanced by the introduction of subscription platforms (e.g. Patreon), donations, brand deals and sales of merchandise. In essence, the phenomenon of monetization has transformed YouTube from a mere video repository to a labour hub providing content creators with a *de facto* labour option in a form of earning money from video content.

Yet, the professional life of content creators lies in their own hands only to a certain extent as chances of professional success on the platform are determined by the infamous YouTube algorithm.[5] The algorithm draws a distinct line between hobbyists and professional YouTubers, the

[2] Niebler, V. (2020). 'YouTubers unite': collective action by YouTube content creators. *Transfer: European Review of Labour and Research,* 26 (2), 223.
[3] van Es, K. (2019). YouTube's Operational Logic: "The View" as Pervasive Category. *Television & New Media,* 21 (3), 229.
[4] Niebler, *supra nota* 2.
[5] Wu, E.Y., Pedersen, E., Salehi, N. (2019). Agent, Gatekeeper, Drug Dealer: How Content Creators Craft Algorithmic Personas. *Proceedings of the ACM on Human-Computer Interaction,* 3, 2.

main aspect of the difference between the two defined by the possibility of monetization of content. The former group of content creators receives little to no financial gain from uploading content on YouTube while the latter benefits from an ability to monetize their content – in other words, to be paid for their content by the platform. Monetization of content is theoretically and practically possible at any point of the YouTube career, as YouTube Partner Program membership required for monetization of content is eligible for joining even for amateur channels as soon as the subscriber count of the channel reaches a 1000 subscribers.[6] However, most of the content creators are not able to generate sufficient income unless they become well-known.[7] This is when the algorithm becomes explicitly relevant as the level of popularity or the mere prospects of gaining audience and notoriety on YouTube is largely determined by the algorithm.[8]

This chapter examines the essence and nature of the YouTube algorithmic systems. Understanding of how the YouTube algorithms work, how they influence and are influenced by human subjects as well as the scale of algorithmic involvement on YouTube is a foundation necessary for the legal discussion and assessment of the FairTube demands and the automated decision-making in the scope of the rule of law and the GDPR.

1.1. The Nature of the Algorithm and Its Relationship with Human Actors

1.1.1. Expectation v. Reality: The Influence of Human Perception on the Algorithm

While the term 'algorithm' may refer to and define a variety of technological notions, in the realm of YouTube 'algorithm' is to be perceived in a conjunction with the term 'recommendation' forming a notion of a recommendation algorithm, or a recommender algorithm. As the field of the algorithm studies presents a wide variety of definitions and perceptions of the algorithm in a framework of a whole number of disciplines,[9] the understanding of it alters respectively, accounting for the aspects of each discipline. For instance, in the scope of computer science and software engineering, a line is drawn between algorithms and other technical system components

[6] *YouTube Partner Program overview & eligibility* (2020). YouTube Help. Retrieved from https://support.google.com/youtube/answer/72851, 8 January 2021.
[7] Wu, Pedersen, Saheli, *supra nota* 5, 2.
[8] Cunningham, S., Craig, S., Silver, J. (2016). YouTube, multichannel networks and the accelerated evolution of the new screen ecology. *Convergence: The International Journal of Research into New Media Technologies,* 22 (4), 377.
[9] Wu, Pedersen, Saheli, *supra nota* 5, 4.

not encompassing algorithmic values. [10] Unlike the latter, algorithms are designed to undertake a predictable path of procedures and result in a foreseeable, calculated outcome which characterizes them as definitive operations leading to final outputs that follow a particular pattern and are therefore expectable.

However, in between the perfectly predictable lines of code there is room for uncertainty. Algorithm is expected to perform in accordance with the line of the code—this is the part that humans are able to effectively analyse and understand due to the patterns and regularities of the code—but the result is not always perfectly understandable from a human point of view. In other words, we humans are naturally inclined to the practice of asking ourselves the *why* questions and tend to do so with the outputs of the algorithm by reading and narrating the data produced as an outcome. Yet, very often, we find ourselves limited by the ability to do so due to the lack of understanding of the domain of the data resulting from the algorithmic operations. More accurately, it means that while we expect certain outputs from algorithms and algorithmic systems, in some instances, we are not able to explain the said outputs sufficiently, especially in cases when the produced results differ from what has been predicted prior to the reception of the outcome.

The Internet users encounter algorithm on a daily basis, especially in the realm of social media. In the lack of a better understanding of what the algorithm may result in, users tend to observe the outcomes delivered by algorithmic systems and connect them in a personally conducted model concise enough for their own perception.[11] This practice named the algorithmic imaginary is a reflection of users' attempt to transform their experiences of the algorithm into understanding of it.[12] The algorithmic imaginary plays a crucial role not only in users' awareness of the nature of algorithmic systems and the manner in which they operate but, most importantly, in how such operations affect users' experience on the platform and what potential effects they may have on the users' activities on the platform. One may assume that the conclusions derived from such practice are based on causalities and accidental encounters or certain aspects of the algorithmic output and therefore cannot constitute reliable perceptions of how the algorithm works. However, the arguments suggest otherwise, putting an emphasis on real experiences of platform users and their ability to not only shape the perception of the algorithm but also affect users' feelings and

[10] Dourish, P. (2016). Algorithms and their others: Algorithmic culture in context. *Big Data & Society,* 3 (2), 7.
[11] Bucher, T. (2017). The algorithmic imaginary: exploring the ordinary effects of Facebook algorithms. *Information, Communication & Society,* 20 (1), 30.
[12] *Ibid.,* 31.

mood, making the algorithmic influence differ with regard to particular experiences of a particular individual.[13]

1.1.2. The Roles of Content Creators and Viewers in Algorithmic Engagement

When speaking of YouTube and its relationship with human users, it is important to remember the content creators are by far not the only group associating and interacting with YouTube on a regular basis and certainly not the largest. Besides content creators, there are *viewers,* or the ordinary users accessing YouTube for the simple purpose of watching videos. Yet, the role of regular viewers on YouTube cannot be set aside for a number of reasons. Any user may opt to establish their public presence on YouTube by creating a channel with an associated Google account.[14] The possibility to access and use YouTube for watching videos remains even if the user wishes not to sign up on a platform with their Google account credentials and create a channel. In this case, the user's public presence on YouTube is not established which leads to the significant limitation in features available to them, such as, for instance, the possibility to upload videos or leave comments. Once a user creates a personal YouTube channel, though, they may utilize the features of their channel to become a content creator.

In this respect, a fine distinction must be drawn between content creators and viewers. Even though the public presence on YouTube grants the user a possibility to grow on a platform and create content, not every user opts to do so. To put matters in perspective, YouTube video content is growing at a rate of over 500 hours of uploads per minute[15] but not all the content encompassing these figures falls under material uploaded for the purposes of maintaining the YouTube career. Unlike regular YouTube users with a personal channel, content creators provide so-called branded content, tailored specifically to the tastes of their audience and bearing certain distinctive values to it that aids channel promotion and audience growth.[16] Therefore, one of the defining qualities of a content creator distinguishing it from a viewer is connection with the audience, i.e. the YouTuber's output in a form of content creation directed at interaction with their viewers and facilitating active participation in further creations. At the same time, a content creator may as well

[13] *Ibid.,* 42.
[14] *Create a YouTube channel.* YouTube Help. Retrieved from https://support.google.com/youtube/answer/1646861, 8 January 2021.
[15] Moshin, M. (2020). 10 YouTube Stats Every Marketer Should Know in 2021 [Infographic]. *10 YouTube Statistics.* Oberlo. Retrieved from https://www.oberlo.com/blog/youtube-statistics, 8 January 2021.
[16] Gardner, J., Lehnert, K. (2016). What's new about new media? How multi-channel networks work with content creators. *Business Horizons,* 59, 294.

play a role of a regular viewer by engaging with content of other content creators and interacting with it, respectively acting as a part of another content creator's audience.

1.1.2.1. The Recommender System and Its Use of Viewers' Data

When assessing the influence of the YouTube recommender algorithm on content creation, one shall account for the role of viewers as a viable element of this process. As mentioned above, content creators also partake in the activity of watching videos, undertaking the role of a regular viewer, and the algorithm takes note of that. The recommender system is built to facilitate watch-time: in 2018, the recommender algorithm introduced around 70% of the content YouTube viewers engaged with.[17] Such high rates of predictability are explained by a concept of technological seduction, a pattern of algorithmic predictions presented to a user in a form of suggestions based on accumulated user data.[18] YouTube recommender system effectively utilizes a so-called bottom-up form of technological seduction during which the personal and personalized data of multiple users are combined and compared with each other to identify similarities in their digital footprint and generate suggestions accordingly. Therefore, the recommender algorithm actively engages with users' own data of engagement on the platform to provide them with suggestions. This algorithmic technique is known as collaborative filtering, which by nature of its operation, is of automated character, as the algorithm automatically attributes human users with certain behavioural patterns and preferences on the basis on the cross-comparison with other users.[19]

The automated nature of YouTube recommendation patterns is additionally enhanced by the optimization of the system for watch-through: the choice of recommended videos is largely determined by a probability that the user would watch the recommended content from the beginning to the end.[20] By doing so, the algorithm allows YouTube to benefit from profit maximization via advertisement revenue: whenever ads are placed on the video or played prior to its start or right after its end, it is in YouTube's best interests to ensure the video is played until the end and the watching does not stop after that. For this reason, YouTube utilizes an AutoPlay function that allows for a continuous flow of content suggested by the algorithm and that is provided as a default setting, meaning that the user has to turn it off manually.

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[17] Solsman, J.E. (2018). *YouTube's AI is the puppet master over most of what you watch.* CNET. Retrieved from https://www.cnet.com/news/youtube-ces-2018-neal-mohan/, 8 January 2021.
[18] Alfano, M., Fard, A.E., Carter, J.A., Clutton, P., Klein, C. (2020). Technologically scaffolded atypical cognition: the case of YouTube's recommender system. *Synthese,* 4.
[19] King, O.C. (2020). Presumptuous aim attribution, conformity, and the ethics of artificial social cognition. *Ethics and Informational Technology,* 22, 25.
[20] Alfano *et al.*, *supra nota* 18, 4.

Here is where content creators encounter vices and virtues of an automated nature of the recommender system. On the one hand, from the financial point of view, the goals of YouTubers match those of their hosting platform, meaning that both the platform and content creators seek to maximize their ad revenue by increasing the watch-through time, and the algorithms facilitates this incentive by providing features and means to make content effectively return the profits to its creators.[21] On the other hand, profitability of content to the content creators only seems possible if they are "algorithmically recognizable".[22] Not only does it require content creators to adjust their content to the algorithmic demands of the platform, resulting in content that is algorithm-dependent, but also dictates the need to keep oneself up-to-date in terms of algorithm contingency, or the current architecture of the recommender system. As YouTube alters the recommender algorithm with exceptional regularity, YouTubers find themselves in a position of having to test their output continuously in order to make their content relevant and visible to the algorithm.

1.1.3. Defining the Relationship between the Algorithm and Users

There are at least two interpretations to draw as conclusions to the above-mentioned. On the one hand, one may argue that the fate of the content—in particular, its ability to reach the audience and to be promoted by YouTube—lies solely with the data-driven processes of the algorithm in an algorithmic environment separated from the judgment of the human actors and relying on cross-examination of data by the algorithmic system.[23] On the other hand, another theory suggests that the role of human intermediaries is intertwined with the algorithmic processes as the experiments and assumptions about how the recommender system works gives content creators the opportunity to separate some distinctive elements of its operation and successfully promote their content by following the patterns of algorithmic practices.[24] In the author's opinion, the latter theory is most suitable to the nature of the YouTube recommender system: this argument particularly corresponds the concept of the algorithmic imaginary described on page 12. However, as demonstrated by further research, the said theory is not always applicable to YouTube algorithms as some of them appear to be independent from human actors.

That leads to the conclusion that regardless of the extent to which the algorithm influences data processing, it is nevertheless present in the decisions directly related to content as well as content

[21] *Ibid.,* 21.
[22] Bishop, S. (2020). Algorithmic Experts: Selling Algorithmic Lore on YouTube. *Social Media + Society,* 6 (1), 3.
[23] Hallinan, B., Striphas, T. (2016). The Netflix Prize and the production of algorithmic culture. *New Media & Society,* 18 (1), 129.
[24] Bishop, *supra nota* 22, 3.

creators, directly and indirectly. Therefore, the author concludes that while the automated decision-making is present in YouTube algorithms to a certain degree, its extent is to be precisely determined.

Taking the above-mentioned into account, the YouTube recommender algorithm shall not be perceived as a merely technical entity. As a platform largely driven by content creators and viewers engaging with the said creators in forms that include, but are not limited to, watching content, reacting to it by leaving comments, sharing content with other users via social media channels, the YouTube recommender algorithm is best fit to a concept of an algorithmic system encompassing the mutually affecting elements of human dynamics and predictable code.[25] More precisely, the recommender system is not solely defined by technical means that dictate the users' interactions but is an engaging stream that is prone to change by human interactions and activities on the platform.[26] In even more simplified explanation, this position entails the YouTube recommender algorithm as a combination of human and technical aspects that are inextricably connected to and influenced by each other.

1.2. The Scale of the Automated Decision-Making on YouTube

While understanding the automated nature of YouTube's decision-making policy is generally possible, as was demonstrated by the previous section, identifying its scale might be rather challenging. While the example of the recommender system is utilized to establish the patterns of the algorithmic processing on YouTube and understand its influence on content promotion and position of content creators in the system, the perception of the automated nature of decision-making and processing on YouTube may be best demonstrated with the example of the Content ID system. The author believes that assessment of other algorithmic systems deployed by YouTube, such as Content ID, may give a proper perspective of the automated decision-making and facilitate further legal discussion. It must be noted that since the main objective of the research does not include the matters of copyright law, this section is necessary for the purposes of simply highlighting the scale of automated decision-making on YouTube.

Content ID was designed and introduced on YouTube as the implication of the United States Digital Millennium Copyright Act (DMCA) that laid down the procedure for the notice and

[25] Seaver, N. (2017). Algorithms as culture: Some tactics for the ethnography of algorithmic systems. *Big Data & Society,* 4 (2), 3.
[26] *Ibid.,* 5.

takedown of copyrighted material.[27] The notice-and-takedown mechanism became a major breakthrough for the companies implementing automated systems for processing copyright complaints as it legally allowed business entities and corporations including Google to develop automated means of solving the issue of the enormous volumes of copyright.[28] According to YouTube, Content ID represents a system that matches every video uploaded to the platform with contents of a specific database comprised of files submitted by holders of copyright protection.[29] In reality, the nature of Content ID is entirely algorithmic: the role of the human involvement in the operation of this system is largely limited to the provision of the copyrighted reference files to the system by the copyright owners, after which the algorithm is able to scan videos for the presence of the copyright protected material.[30] Such a process leaves little room for human influence on the system as the algorithm manages content according to matches found between the original video content and the reference files, granting the rightholders the ability to claim monetization of the video on their behalf, shall the matches be found.

It must be noted that the Content ID system does present room for non-automated elements in a form of a dispute and appeal mechanism that invokes the human means of claim review.[31] As the first step of disputing a claim, the content creator should identify the reason (e.g., the fair use clause or a license granted to a YouTuber to use the copyright content) why, in their opinion, copyright owners unjustifiably claimed their content.[32] After the claim submission, the rightholder is notified of the dispute and has to make a decision regarding the copyrighted material within thirty days. After that, the claimant may choose one of the following ways to proceed with the process: a) to release the claim, agreeing to YouTuber's reasoning for the use of copyrighted material,[33] b) to ignore the claim, causing it to expire, c) to uphold the dispute claim, gaining any

[27] H.R.2281 – Digital Millennium Copyright Act, Section 512, p c(3).
[28] Urban, J.M., Karaganis, J., Schofield, B.L. (2017). Notice and Takedown: Online Service Provider and Rightsholder Accounts of Everyday Practice. *Journal of the Copyright Society of the USA,* 64, 374.
[29] *How Content ID works.* YouTube Help. Retrieved from https://support.google.com/youtube/answer/2797370, 14 January 2021.
[30] Gray, J.E., Suzor, N.P. (2020). Playing with machines: Using machine learning to understand automated copyright enforcement at scale. *Big Data & Society,* 7 (1), 2.
[31] *Dispute a Content ID claim.* YouTube Help. Retrieved from https://support.google.com/youtube/answer/2797454?hl=en, 15 January 2021.
[32] YouTube Creators. (2020). *Content ID Dispute Process* [Video]. Retrieved from https://www.youtube.com/watch?v=v65RpZ88bUk&feature=emb_logo, 15 January 2021.
[33] *Supra nota* 31.

revenue gained from the use of copyrighted material in the video,[34] or d) to file a legal copyright takedown request against the content creator's account.[35]

It is important to differentiate between a Content ID claim, which restricts the monetization of the video for the benefit of a content creator but allows for the video to still be displayed on the platform,[36] and a copyright strike, a formal request submitted by a copyright holder in accordance with the legal requirements of their state and identifying copyright infringement.[37] If a Content ID claim results in a claimant either upholding the claim or submitting a copyright takedown request, YouTube leaves a possibility for an appeal as a last resort for its content creators. The appeal is reviewed and handled by YouTube itself and obliges the content creator to prepare the counter notification in accordance with the legal requirements and provide an explanation of reasons due to which, in the content creator's opinion, their video was restricted or taken down erroneously.[38]

Due to the limitations of this thesis, the author chose not to delve into details of assessing the next steps of the appeal process. Most importantly for the further discussion, the author observed that the Content ID system, while being primarily automatic, could not be considered a fully automated system driven by the algorithm alone due to the human participation at the stage of the claim dispute and appeal.[39] However, before elaborating on the matter of how the automated decision-making fostered by YouTube algorithmic systems violates the rights of content creators in the scope of the GDPR, it is crucial to define the negative implications of such decision-making processes and compose a more cohesive picture of what obstacles content creators face on a regular basis as a result of the algorithmic decisions.

[34] *Content ID overview.* YouTube Creator Academy. Retrieved from https://creatoracademy.youtube.com/page/lesson/respond-to-content-id-claims_content-id-claims-overview_video, 15 January 2021.
[35] *Supra nota* 31.
[36] *Monetization during Content ID disputes.* YouTube Help. Retrieved from https://support.google.com/youtube/answer/7000961, 15 January 2021.
[37] *Copyright Infringement Notification Requirements.* YouTube Help. Retrieved from https://support.google.com/youtube/answer/6005900, 15 January 2021.
[38] *Submit a copyright counter notification.* YouTube Help. Retrieved from https://support.google.com/youtube/answer/2807684#appeal, 15 January 2021.
[39] Boroughf, B. (2015). The Next Great Youtube: Improving Content ID to Foster Creativity, Cooperation, and Fair Compensation. *Albany Law Journal of Science & Technology,* 25 (1), 109.

1.3. Implications of the Automated Decision-Making and the Rule of Law

1.3.1. On Algorithmic Regulation and Its Connection to the Rule of Law

The assessment of the YouTube algorithms demonstrated above allows several conclusions to be drawn with regard to the negative implications the algorithm-based automated decision-making bears from a legal perspective. One of such conclusions underlines the nature of the algorithms as processes capable of the regulatory function, either serving as actual operating implementation of the existing normative act or creating their own *ad hoc* rules.[40] In other words, algorithms invoke the processes of the automated decision-making on the basis of the data at their disposition. Such data-driven processes lead to an ability to make data-driven automated decisions, one of the most prominent characteristics of which is data-based preferential treatment.[41] For instance, the bank that implements an analytical system performing predictive processes of the said bank's customers to determine which customers are most lenient towards becoming clients of another bank may turn to some preferential practices such as offering special services to such customers in order to prevent them from switching to another bank. Such favourable treatment implies the risk of discriminatory repercussions and, in case of the algorithmic decision-making, such implications may not necessarily be intentional. In the scope of the YouTube algorithms, this statement can be exemplified by the manner in which the recommender system facilitates the promotion of the set of particular types of content, as demonstrated in the previous section of this thesis. However, the relatability of this challenge to the legal domain may seem to be of little importance to the rule of law. The author believes that approaching the algorithm from a self-regulatory viewpoint plays a significant role in this discussion.

Automated decision-making matters to law and the legal system due to its specific relationship with data.[42] Decisions made by means of algorithmic processes give rise to the so-called "algorithmic regulation", or the processes in which the power to adequately assess, judge and direct human behaviour is delegated to the line of the code. To law, such legitimization of the algorithmic regulation raises questions about discrimination, privacy, transparency and fairness, among other legal factors. The main problem underlining this undoubtedly legal challenge lies in the ability of data to verify assumptions: a practice suggesting the possibility to invoke causality

[40] Bayamlıoğlu, E., Leenes, R. (2018). The 'rule of law' implications of data-driven decision-making: a techno-regulatory perspective. *Law, Innovation and Technology,* 10 (2), 301.
[41] Dormehl, L. (2015). *The Formula: How Algorithms Solve All Our Problems and Create More.* New York, USA: TarcherPerigee.
[42] Bayamlıoğlu, Leenes, *supra nota* 40, 302.

which data as entity essentially lacks. As revealed earlier in the case of the recommender system utilizing the means of collaborative filtering, it exemplifies the notion that data is capable of establishing correlation (such as comparing data sets of multiple users and suggesting recommendations based on the correlation between them)[43] rather than causality. This conclusion inherently raises a question of whether a decision based solely on correlation is just and fair.[44]

Respectively, this conclusion is relevant to a question of whether correlation without causality is of sufficient degree satisfactory to the rule of law. The principle of the rule of law requires the rules to be general and clear as well as of equal application.[45] In addition to these factors, the rules in question must be declared publicly and their application must be effectively anticipated. Finally, the protection of the individuals' personal rights as one of the defining characteristics behind the rule of law is deemed possible only in the environment of constant application of rules, the order of which is universally perceivable as well as non-contradictory.[46] In other words, the subjects to individual rights need to be aware of the scope of their application and the limits to such application. Luckily, the rule of law in itself allows its subjects to assess whether the above-mentioned crucial aspects of this principle are met by vesting with them the ability to contest decisions.

1.3.2. Importance of Adhering Automated Decision-Making to the Rule of Law

Contesting algorithmic decisions in the scope of the rule of law lays down the right of subjects to the automated decision-making to be aware of its existence as well as to be informed about the implications and means of challenging automated decisions.[47] These elements comprising the ability to contest decisions make it the backbone of the rule of law as it grants the subjects procedural ways to hold the lawmakers, namely the creators of the rules, responsible for their own creation, subsequently creating an environment of self-regulation.[48]

Despite rather obvious differences between the fields of study of computer science and law, both meet on the common ground when the algorithms are concerned. Such common notion is recognized by both scientific fields with respect to transparency and accountability of algorithms,

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[43] King, *supra nota* 19, 25.
[44] Bayamlıoğlu, Leenes, *supra nota* 40, 302.
[45] Tamanaha, B.Z. (2004). *On the Rule of Law: History, Politics, Theory.* Cambridge, UK: Cambridge University Press.
[46] Bayamlıoğlu, Leenes, *supra nota* 40, 304.
[47] Hildebrandt, M. (2013). Profile transparency by design? Re-enabling double contingency. In: Hildebrandt, M., de Vries, K. (Eds.), *Privacy, Due Process and the Computational Turn: The Philosophy of Law Meets the Philosophy of Technology* (221-246). New York, USA: Routledge.
[48] Hildebrandt, M. (2015). *Smart Technologies and the End(s) of Law: Novel Entanglements of Law and Technology.* Cheltenham, UK: Edward Elgar Publishing, 10.

although instilling rather varying aspects in these terms.[49] More specifically, both scientific fields agree that automated decision-making does not always deliver a desirable result or create a system, whether a computerized or a legal one, to regulate the desirable outcome. Automated decision-making has been labelled as lacking transparency, and introducing the concept of transparency into the architecture of algorithmic processes guiding decisions is often seen as a solution to the challenge of unforeseen algorithmic results.[50] Transparency in a context of algorithms is a reflection of a so-called fear of the algorithm: in other words, the underlying human response to the nature of the algorithm that a human actor is not able to perceive or explain[51] and therefore fears that the algorithm will inevitably deliver a result that is discriminative or suppressive in one way or another.[52] Therefore, by seeking transparency in automated decision-making, those involved in contemplating the outcomes of this process usually desire to identify 'hidden' flaws and errors in the algorithm and, whenever it delivers a problematic result, to hold someone behind the algorithm responsible for the decision.[53] This statement is essentially deconstructed in a so-called "chain of command" in which the algorithm itself is not seen as a wrongdoer but rather a tool in the hands of its original creators. This suggests that the implementation of the ability to deliver problematic results comes from the intent of the creators or the system operators which, consequently, may only be identifiable through deconstruction of the algorithm and reviewing its separate elements.[54]

This brings us to the concept of accountability. As indicated earlier in this chapter, the ability to understand and contest decision constitutes one of the fundamental elements of the rule of law,[55] and one may observe how it resonates with the concept of accountability. In short, accountability translates as an ability to hold the representatives behind a decision-making force responsible and advocate for a change.[56] However, if the subjects to the decision-making are unable to evaluate the compliance of the process with the respective rules in force due to the lack of clarity or disclosure of what rules must be followed, one cannot effectively engage in expressing their views or influencing the vector of future development of the issue in question. In the scope of the automated decision-making, the principle of accountability stretches onto the system encompassing the

[49] Desai, D.R., Kroll, J.A. (2017). Trust But Verify: A Guide to Algorithms and the Law. *Harvard Journal of Law & Technology,* 31 (1), 7.
[50] *Ibid.,* 8.
[51] See chapter 2.1.
[52] Desai, Kroll, *supra nota* 49, 8.
[53] Barocas, S., Selbst, A.D. (2016). Big Data's Disparable Impact. *California Law Review*, 104, 694.
[54] Desai, Kroll, *supra nota* 49, 9.
[55] Hildebrandt (2015), *supra nota* 48, 10.
[56] Desai, Kroll, *supra nota* 49, 9.

algorithm engaged in the decision-making process, which, unlike human representatives of the government elected by other human subjects, is generally unable of prioritizing or merely taking into account the human dignity.

Effects the algorithmic data processing may have on human subjects with respect with their dignity first became evident at least three decades ago, long before the implementation of the algorithmic decision-making into online platforms such as YouTube.[57] Today, protection of human dignity with regard to automated decision-making may be traced in the EU data protection law and the GDPR in a rather transformed form of the right of the subjects to automated decision-making to be aware of the reasons behind the decision—in other words, to be presented with the explanation.[58]

Overall, while identifying the above-mentioned aspects of the rule of law, such as contesting decisions, protection of human dignity and the right to receive the explanation associated with it, transparency and accountability, is sound with regard to the importance of adhering automated decision-making to the rule of law, the application of these principles to YouTube might not be instantly evident from the discussion laid down in this section. While it is crucial to keep these principles in mind while seeking possible ways of how YouTube's algorithmic systems may be adhered to the rule of law, the thesis is yet to demonstrate other staples required for developing the course of action pursuant to the research questions. The next chapter tackles exactly one of such staples by looking at YouTube from a perspective of a labour provider, assessing the FairTube campaign and demonstrating the relevance of these standpoints to personal data protection law and the GDPR.

[57] Schwartz, P. (1991). Data Processing and Government Administration: The Failure of the American Legal Response to the Computer. *Hastings Law Journal,* 43, 1349.
[58] Desai, Kroll, *supra nota* 49, 9.

2. YOUTUBE V. FAIRTUBE: AUTOMATED DECISION-MAKING AND PERSONAL DATA RIGHTS VIA THE LENS OF PLATFORM WORK

Earlier in this thesis (Chapter 1.1.2), the author elaborated on the role of content creators in shaping the algorithmic behaviour where the said role was assessed from the point of view of interchangeability of a YouTuber's position on the platform as both a creator of content and its consumer (i.e. a viewer). This context is essential for understanding of where content creators stand if we look at YouTube from a perspective of a labour provider. It is similarly important to examine the implication such position bears with regard to the personal data rights due to the difference in the element of labour attributed to a role of a user as a content creator and as a mere viewer. Subsequently, the rights applicable to content creators as platform workers may differ from those applicable to regular users/viewers from a standpoint of the scope of protection of rights and the manner in which such protection may be enforced and limited. Therefore, as a first step, it is crucial to determine whether content creators fall under the definition of workers, particularly platform workers, under the EU law and whether monetized content creation on YouTube may be regarded as employment according to the relevant EU law provisions.

2.1. YouTube as a Labour Hub and the Implications of the New Employment Model on Personal Data Rights

2.1.1. YouTube in a Spectrum of Platform Work

Platform work is a relatively novel term that emerged in 2006 by the name of 'crowdsourcing'.[59] The definition of the term has evolved ever since currently representing different clusters of

[59] Gyulavári, T. (2020). Collective rights of platform workers: the role of EU law. *Maastricht Journal of European and Comparative Law,* 27 (4), 3.

platform workers varying by types and places of work and the required skills classified by Eurofound in ten forms.[60] However, the most widely accepted classification distinguishes between two large groups of platform workers, the former working in "crowdsourcing' and the latter working 'on-demand via apps'.[61] Upon further investigation, these two major types of platform work reveal particular differences in their manner of performance. In the case of crowdsourcing, the emphasis is put on the large scale of operation usually characterized by its global character—i.e. the platform tends to engage with as many businesses and individuals as possible without prioritizing the quality of skill of the workers involved in the platform work but rather investing in global availability of services and relative ease of access to such services. On the other side of the spectrum are the 'on-demand work via apps' platforms that, unlike crowdsourcing, downscale their operations to offer provision of services locally rather than globally and tend to ensure the workers they engage with possess the adequate level of skill in order to comply with the minimum quality standard of the services they offer. Therefore, while platform work possesses similar characteristics, the main forms also present crucial differences that, as demonstrated above, encompass the scale of operations (global v. local) as well as the relationship between a platform and its workers.

Considering these differences, it becomes possible to determine the place of YouTube in the spectrum of platform work to understand the manner in which YouTube as a platform engages with its workers (i.e. content creators). Based on the definitions given above, it is evident that YouTube's stance in the field of platform work is that of a crowdsourcing form. Indeed, YouTube positions itself as a global platform that encourages content creators to produce content that "resonates well worldwide" as well as shares tips and tutorials on building a global audience and engage with topics that may be of interest to a larger group of people internationally rather than locally.[62] Similarly, there is no set of requirements underlying the level of proficiency or proof of one's qualification that an aspiring YouTuber should abide by in order to start publishing content on YouTube. Since anybody with access to a device that supports Internet connection can use YouTube, this condition alone is sufficient to start producing content.[63]

However, even though YouTube seems to fit in the scope of the platform providing work for its users as demonstrated above, it does not provide sufficient or credible evidence to deem content

[60] Eurofound Employment and Working Conditions of Selected Types of Platform Work Research Report 2018.
[61] Gyulavári, *supra nota* 59, 3.
[62] *Produce videos with global appeal.* YouTube Creator Academy. Retrieved from https://creatoracademy.youtube.com/page/lesson/global-format, 7 February 2021.
[63] Moreau, E. (2020). *What Is YouTube: A Beginner's Guide.* Lifewire. Retrieved from https://www.lifewire.com/youtube-101-3481847, 7 February 2021.

creators as YouTube's workers or employees automatically. One of the distinct features attributed to platform workers emphasises the independent nature of their work as well as the tasks they perform.[64] Moreover, platform workers are not required to engage with other platform workers to perform their tasks and rarely meet in person as a result. Finally, regardless of the global or local scale of platform operation, platform workers still face competition with each other and are forced to develop their own practices to withstand it and remain in business. The said criteria may be applicable to content creators given the nature of their field of work: since content creators are scattered all over the world, they may opt to work with other content creators for cross-promotion and expanding the current fan base in a practice known as a *collaboration*.[65] However, content creators use collaborations as a tool for promoting and growing the already well-established audience gained as a result of regular content uploads.

Since making and uploading content is representative of the YouTuber's individual work, it may be assumed that content creators fall under the definition of self-employed. However, whether employed by YouTuber as a platform or self-employed, it is still unclear how YouTubers benefit from particular categorization of their labour in terms of protection of their rights. In other words, is it important to ensure content creators enjoy a very particular labour status under the EU law and is there any difference in the scale of such protection with regard to the status of an employed and a self-employed person? The answer to this question is by no means one-dimensional. At this point, the author must note that the matters of the EU employment law and employment protection as well as the underlying legal challenges are excluded from the scope of the current work due to the limitations indicated in the introduction to this thesis. However, identifying the employment status of YouTubers in the EU legal framework facilitates answering the research questions through the perspective of collective rights attainted to employment protection.

2.1.2. Collective Rights as Link between Content Creators, Personal Data and Automated Decision-Making

Collective rights of employed persons represent a mechanism of balancing the power attributed to employees as a weaker party and the employer, possessing greater power and in some cases,

[64] Johnston, H., Land-Kazlauskas, C. (2019). Organizing on-demand: Representation, voice, and collective bargaining in the gig economy. *ILO Conditions of Work and Employment Series Working Paper,* No. 94. Geneva: International Labour Office, 3.
[65] *Collaboration.* YouTube Creator Academy. Retrieved from *https://creatoracademy.youtube.com/page/lesson/collaboration*, 7 February 2021.

disproportionately greater.[66] In the current EU employment law framework, collective rights such as access to information and consultation rights of platform workers are provided by Article 153 of the Treaty on the Functioning of the European Union (TFEU) while Article 28 of the Charter of the Fundamental Rights of the European Union sets forth the right to collective bargaining. The main problem for platform workers and for content creators, respectively, stems from the fact that although the binary division between employed and self-employed statuses persists in the European legal framework,[67] both enjoy the very same scope of the said legal framework offering little room for adapting the legal provisions to the individualized features of each status.[68] Moreover, when applied to platform workers, most of the existing employment tests subsequently fail to meet the requirement of subordination usually existing between employees and employers, in which case a platform worker qualifies as self-employed. In turn, this status rids them of the protection of Article 153 TFEU that excludes self-employed persons from its scope, meaning that they cannot claim the protection of their respective collective rights, including collective bargaining and collective consultation.

Collective consultation and bargaining are the key elements that constitute a link between content creators, protection of personal data and the role of the algorithmic decision-making and allow the author to answer the question of how the employment status affects content creators' personal data rights and why it is important to assess it from the perspective of the new models of employment. Since the Internet is essential to the functioning and overall existence of the platform work, some platforms rely on the algorithm in organizing work.[69] Algorithms may facilitate the organization and performance of workflow by performing task allocation, rating calculation, determining the income level on the basis of the tasks performed and rating received, setting overtime requirements for income influx as well as making decisions on disciplinary misconduct, including suspension and deactivation of a worker's profile.

At this point, it is possible to draw parallels with the role of the algorithm on YouTube and the consequences in has on content creators. In short, calculation of ratings and attributing the income level in accordance with the rating received by workers specifically resonates with the nature of the YouTube recommender system while the element of making decisions on disciplinary measures and profile suspension on YouTube is determined by the Content ID system.[70] Due to the explicitly

[66] Gyulavári, *supra nota* 59, 4.
[67] Doherty, M., Franca, V. (2020). Solving the 'Gig-saw'? Collective Rights and Platform Work. *Industrial Law Journal,* 49 (3), 353.
[68] Gyulavári, *supra nota* 59, 4.
[69] *Ibid*., 6.
[70] *Copyright strike basics.* YouTube Help. Retrieved from

distinct role the algorithmic systems of YouTube play in generating and enforcing decisions regarding the content produced by content creators and having direct effect on content creators' working conditions, collective rights of YouTubers attributed to them as to platform workers allow them to "negotiate the algorithm"—in other words, to have tools and means to challenge decisions issued by automated means before human experts in command of providing the platform workers with the essential working conditions.[71]

As per the question of whether YouTubers are entitled to collective rights and their protection since they are not formally employed by YouTube, it was effectively answered by the recent European Court of Justice (ECJ) ruling of *FNV Kunsten* that extended the scope of the definition attributed to the term 'employee' to include 'false self-employed'. Unlike 'regular' self-employed, false self-employed workers are economically dependent on the platform with which they are associated, as their conduct on the market is determined by the platform itself while the false self-employed act in accordance with the said conduct.[72] Therefore, being false self-employed, content creators fall under the definition of a worker. Underlining this status is crucial not only because it grants content creators legally justified access to collective rights but also to the protection of trade unions.[73] The FairTube campaign is the most prominent example of the real-life exercise of YouTubers' right to trade unions' protection, sprung from the YouTubers Union and taking concerns of content creators further than ever before.

2.2. The FairTube Campaign: from Protecting Collective Rights of YouTubers to Claiming GDPR Violations

In the case of YouTube, the emergence of the YouTubers Union in 2018 signified the realization of the above-mentioned factors related to the place of content creators in the existing employment model in practice.[74] As corporate advertisers started cancelling sponsorships and reducing their financial contribution to the platform as a response to the new advertisement placement policy enacted by YouTube in 2017, YouTubers, economically dependent on advertisers, were the first to

https://support.google.com/youtube/answer/2814000#zippy=%2Cwhat-happens-when-you-get-a-copyright-strike, 15 January 2021.

[71] de Stefano, V. (2019) Negotiating the Algorithm": Automation, Artificial Intelligence, and Labor Protection. *Comparative Labor Law & Policy Journal,* 41 (1), 28-29.

[72] European Court of Justice decision, 4.12.2014, FNV Kunsten Informatie en Media v Staat der Nederlanden, C–413/13, EU:C:2014:2411, point 33.

[73] Johnston, Land-Kazlauskas, *supra nota* 64, 5.

[74] Niebler, *supra nota* 2, 224.

experience the negative impacts such actions had on their income. The said event marked a starting point of the stringent content moderation by YouTube algorithmic systems that led to arbitrary sanctions against content creators, negative effects on content visibility in the recommendations as well as channel shutdowns.[75]

The YouTubers Union, comprised of both content creators and viewers, publicly called out YouTube for the lack of proportionality and the overly intrusive nature of algorithmic decision-making.[76] The trade union's efforts seemed to have caught YouTube's formal attention as its representative was invited to the platform's headquarters for negotiations regarding the outlined concerns.[77] However, the talks resulted in YouTube's abstinence from adopting YouTubers Union's proposals, which led the group to join efforts with Europe's largest trade union, IG Metall.[78] From there on, the two trade unions launched the FairTube campaign—the initiative that became the first formal attempt to hold YouTube responsible for the GDPR violations resulting from the platform's abuse of the algorithmic systems and the process of automated decision-making.

On 26 July 2019, IG Metall's Vice President Christiane Benner and the YouTubers Union's representative Jörg Sprave addressed YouTube with a formal letter of demands[79] calling for the start of negotiations to implement the changes. The letter summarized the demands in the list of five proposals, requiring YouTube:

1. to disclose all categories and criteria affecting content creators' income, i.e. affecting monetization decisions and promotion of content by the recommender system;

2. to provide precise explanations about decisions regarding content and channels made by the algorithmic systems, e.g. underlining the exact provisions or terms of the exact policy violated by the content creator;

3. to provide access to qualified human review as well as contact persons for communication with content creators in regards with review of their content and discussing the results;

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[75] Kumar, S. (2019). The algorithmic dance: YouTube's Adpocalypse and the gatekeeping of cultural content on digital platforms. *Internet Policy Review,* 8 (2), 4—5.
[76] Sprave, J. (2018). *The Spark.* YouTubers Union. Retrieved from *https://youtubersunion.org/content/spark*, 16 February 2021.
[77] Niebler, *supra nota* 2, 224.
[78] Szegfü, A. (2019). *"FairTube": IG Metall and Youtubers Union launch joint initiative.* IG Metall. Retrieved from https://www.igmetall.de/download/20190722_Presseinformation_Joint_Venture_EN_35b71bba37474446ae6e3618b43d061c6e0ed9af.pdf, 19 February 2021.
[79] Christiane Benner, IG Metall Vorstand – German Metalworkers' Union, Vice President, Jörg Sprave, YouTubers Union, letter 26 June 2019.

4. to give content creators possibility to contest negative decisions and to establish a special dispute resolution board;

5. to create a formal body comprised of content creators as its members for resolving and discussing issues related to decisions related to content creators and affecting them.

On the one hand, IG Metall and the YouTubers Union's attempt to change YouTube's stance towards the implemented system of decision-making by issuing a simple letter of demands might seem inefficient, as it did not give rise to any formal legal obligations to comply with in the first place. At the same time, the letter's authors had a clear understanding of such implications while compiling the list of demands: thus, they formulated the demands in line with the text of the GDPR provisions.[80] In his interview to Vice,[81] IG Metall's project secretary Michael Silberman explicitly mentioned the union's reliance on the GDPR for taking more serious, possibly legally binding action, as well as the emphasis the demands put on such GDPR provisions[82] as transparency of data processing,[83] right of access,[84] and right to rectification,[85] as well as the relationship between YouTube as data controller [86] and YouTubers as data subjects. [87] Additionally, Silberman commented[88] on how the trade union's demands aim at aiding content creators in preventing negative implications that "living under algorithmic management" may have on their mental health. Particularly, it indicates that the FairTube demands were specifically designed to combat ill effects of data processing and decision-making performed by YouTube's algorithmic systems,[89] which in turn finds legal grounds in the GDPR provisions on automated decision-making and profiling.[90]

As indicated in the introduction to the study, the purpose of this research is to assess the GDPR violations specifically associated with algorithmic systems of YouTube and automated decision-making. While violations of other personal data rights may be taken into account, the author focuses primarily on the legal framework and interpretation of the GDPR provisions on automated decision-making to further identify the solutions that the text of the Regulation and other relevant

[80] Ongweso Jr., E. (2019). *The YouTubers Union Is Not Messing Around.* Vice. Retrieved from https://www.vice.com/en/article/j5wy8d/the-youtubers-union-is-not-messing-around, 15 March 2021.
[81] *Ibid.*
[82] *Compliance with Data Protection Regulation.* FairTube. Retrieved from https://fairtube.info/compliance-with-data-protection-regulation/, 15 March 2021.
[83] OJ L 119, 4.5.2016, *supra nota* 1*,* art 5, p 1(a).
[84] *Ibid.,* art 15.
[85] *Ibid.,* art 16.
[86] *Ibid.,* art 1, p 7.
[87] *Ibid.,* art 1, p 1.
[88] Ongweso, *supra nota* 80.
[89] *Supra nota* 82.
[90] OJ L 119, 4.5.2016, *supra nota* 1*,* art 22.

sources may provide. The next chapter elaborates on the legal aspect of this challenge. For that, the author first defines the legal basis for automated decision-making in the scope of the GDPR and proceeds to identify the key concepts linking the technological aspects of the algorithmic systems to their implementation in the text of the Regulation, such as interpretation and safeguards. Finally, the author demonstrates how the above-mentioned factors are reflected in real life circumstances by interviewing content creators and linking their responses to possible violations.

3. ASSESSING AUTOMATED DECISION-MAKING IN THE SCOPE OF THE GDPR

3.1. Defining Automated Decision-Making and its Types

The GDPR lays down a separate provision concerning the matters of automated decision-making. The provision in question is found in Article 22 on automated individual decision-making, including profiling and stipulates the rights of the data subject to be exempt from being subject to decisions based on automated means of processing and profiling given that the said decisions affect the data subject in any form or "produce legal effects" with regard to them.[91] The right laid down in Article 22(1) is not applicable in three instances:[92]

1. if the decision is required for entering into or performing a contract between the data subject and a data controller;
2. if the decision "is authorised by Union or Member State law to which the controller is subject", given that the data subject's rights and freedoms as well as legitimate interests are protected by adequate safeguards;
3. if the data subject has given explicit consent to the automated decision.

While the second point explicitly requires the relevant EU or Member State law provision to provide suitable safeguards to uphold the rights and freedoms and the legitimate interests of the data subject, in the case of points 1 and 3 this obligation is vested in the data controller.[93] Article 22(3) sets the minimum standard[94] to the said obligation in a form of ensuring human intervention in the automated process, accessible to the data subject for the purposes of expressing their opinion and contesting the decision. Provisions laid down in paragraphs 2 and 3 of Article 22 are elaborated

[91] OJ L 119, 4.5.2016, *supra nota* 1, art 22, p 1.
[92] *Ibid.,* art 22, p 2.
[93] *Ibid.,* art 22, p 3.
[94] Kaminski, M.E. (2018). The Right to Explanation, Explained. *Berkeley Technology Law Journal,* 34, 198.

on in greater detail in recital 71 that emphasises the mandatory inclusion of human intervention in automated decision-making and the data subject's right to express their point of view regarding the decision.[95] However, unlike provisions of Article 22, recital 71 gives specific reference to the right of the data subject to obtain an explanation of the decision, provided to them by a human actor after human-involved evaluation, and to contest the decision. This right to obtain an explanation as worded in recital 71 gave rise to the legal debates on the existence of a right to explanation in the GDPR soon after its adoption, as it may be traced in the non-binding text of the recitals to the Regulation while none of its legally binding Articles contains explicit reference to this right.[96]

Finally, Article 22 (4) of the GDPR[97] bars the application of exceptions laid down in Article 22 (2) for issuing automated decisions involving the special categories of data stipulated by Article 9(1). However, the limitations of Article 22 (4) do not apply if the explicit consent of the data subject has been obtained,[98] the automated processing of sensitive data is required for the public interest,[99] and if the data subject's rights and freedoms as well as legitimate interests are protected by suitable safeguards.[100]

Article 22 is not the only source for rights and limitations concerning the automated decision-making in the GDPR. The legal framework is expanded by provisions on the notification of data subjects and the right to access related to automated decision-making processes. The former is expressed in Article 13 providing the obligation of the controller to notify the data subject of the information they collect directly from the data subject [101]as well as in Article 14 setting forth the similar notification right in the case of personal data collection from third parties.[102] The right of access provided by Article 15 sets forth the right of the data subject to claim the copy of their personal data from the data controller[103] that can be requested "at reasonable intervals".[104] All three Articles contain the explicit reference to the obligation of the data controller to disclose the

[95] OJ L 119, 4.5.2016*, supra nota* 1*,* recital 71.
[96] Goodman, B., Flaxman, S. (2016). European Union regulations on algorithmic decision-making and a "right to explanation". *AI Magazine,* 38 (3), 1.
[97] OJ L 119, 4.5.2016, *supra nota* 1, art 22, p 4.
[98] *Ibid.,* art 9, p 2(a).
[99] *Ibid.,* art 9, p 2(g).
[100] *Ibid.,* art 22, p 4.
[101] *Ibid.,* art 13.
[102] *Ibid.,* art 14.
[103] *Ibid.,* art 15.
[104] *Ibid.,* Recital 63.

information related to "the existence of automated decision-making, including profiling" as well as the logic of such processing and the effects of its consequences on the data subject.[105]

As the framework for automated decision-making in the GDPR is outlined, it is reasonable to consider it multidimensional and complex, which corresponds to the similarly vast variety of automated decision types, encompassing procedural and substantive, algorithmic and non-algorithmic, and rule-based and law-based decisions.[106] However, essentially, such complexity reflects in a notion that individuals such as YouTubers may be unaware of the differences underlying each decision type and how algorithms interact with them while making decisions. Therefore, the GDPR must have been designed to close this gap between individuals and the algorithm. This is where the term 'legibility' becomes the key point.

3.2. The Concept of Legibility as the Key Link between Transparency and Automated Decision-Making

The above-mentioned gap in our perception of output delivered by the algorithmic system means that the actual output might differ from the expectable outcome and, more often than not, we lack plausible explanation for the received outcome in comparison with the predicted results.[107] This comprehension of data by human individuals is referred to as readability.[108] At the same time, the said term cannot be perceived as equal to and, most importantly, replacing the term 'comprehension'. Comprehension in the scope of readability is not to be confused with comprehensibility of data and the algorithmic processes: while readability does incorporate the notion of comprehensibility, it remains limited in providing no solutions to the issue of algorithm and data perception by an individual. In other words, readability facilitates comprehension but lacks transparency.

In the scope of Articles 15 and 22 of the GDPR,[109] the sufficiency of the mere readability of data to the right of the data subject to receive "meaningful information about the logic involved in a

[105] *Ibid.,* art 13 p 2(f), art 14, p 2(g), art 15, p 1(h).
[106] Brkan, M. (2019). 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 (2), 94.
[107] Dourish, *supra nota* 10, 7.
[108] Gao, Q., Lin, M., Sias, R.W. (2018). *Words Matter: The Role of Texts in Online Credit Markets.* In: Gao, Q. (2016). *Empirical Studies of Online Crowdfunding.* (Doctoral dissertation) The University of Arizona Graduate College, Tuscon, 19.
[109] OJ L 119, 4.5.2016, *supra nota* 1, art 15, p 1(h), art 22.

decision-making" presents a challenge of formulating the most plausible interpretation of the said provision that would incorporate the concepts of comprehensibility, readability, and transparency.[110] The above-mentioned right to receive "meaningful information about the logic" of the automated decision may be interpreted dually. In the first case, it presupposes the right to receive information as such: in other words, the right of the data subject to be notified of the automated means involved in data processing on a general scale.[111] In the second case, the terms "meaningful information" used in the wording of the provision indicate the possible interpretation of this right as the right to receive explanation: in this case, the individual is entitled to a notification of the data processing and decisions concerning the individual themselves rather than those of a general nature. While neither interpretation concept considers the data subject's active participation in attaining comprehensibility of their interaction with data and algorithms,[112] both options provide a better alternative to the concept of readability by including the element of transparency.[113] Yet, both concepts of readability and receiving information/explanation may put data subjects in a situation of only partial awareness as opposed to full, all-encompassing perception of the automated decision-making and the processes involved.

The challenge of ensuring data subject's awareness of the automated processing and decision-making to the full extent suggests the combination of transparency and comprehensibility of data and algorithms. This idea is reflected in a concept of legibility.[114] First proposed as the term in the field of human-computer interaction, it originally incorporated the notion that the perception of data may differ from user to user; yet, all of the viewpoints shall be considered valid. Moreover, understanding and perception of data is prone to change over time and this changeability shall also be taken into account in ensuring transparency and comprehensibility of data. Therefore, legibility suggests that companies implementing automated data processing and decision-making must make the information of the methods involved and data consumed open and available to data subjects.[115] However, matters of intellectual property that bar companies from disclosing the said information usually restrict this roadmap to transparency and comprehensibility.

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[110] Malgieri, G., Comandé, G. (2017). Why a Right to Legibility of Automated Decision-Making Exists in the General Data Protection Regulation. *International Data Privacy Law,* 7 (4), 245.
[111] Wachter, S., Mittelstadt, B., Floridi, L. (2017). Why a Right to Explanation of Automated Decision-Making Does Not Exist in the General Data Protection Regulation. *International Data Privacy Law,* 7 (2), 78.
[112] Malgieri, Comandé, *supra nota* 110, 245.
[113] Zarsky, T.Z. (2013). Transparent Predictions. *University of Illinois Law Review,* 2013 (4), 1530--1550.
[114] Mortier, R., Haddadi, H., Handerson, T., McAuley, D., Crowcroft, J. (2014). *Human-Data Interaction: The Human Face of the Data-Driven Society.* ArXiv. Retrieved from https://arxiv.org/pdf/1412.6159.pdf, 19 February 2021, 5.
[115] *Ibid.,* 4.

Overall, in order for the right of the data subject to receive "meaningful information about the logic involved" in automated processes and decision-making, data and algorithms comprising the said processes must meet the criteria of comprehensibility of how the algorithm operates and transparency of how it is used.[116] As this conclusion is drawn, it is possible to determine whether the GDPR effectively implements the idea of legibility and whether its provisions on automated decision-making may be interpreted accordingly. Said clarifications are contained in the text of the Recitals to the GDPR as well as Article 29 Data Protection Working Party Guidelines on Automated individual decision-making and Profiling (hereinafter: WP29 Guidelines).[117]

3.3. From Legibility to Algorithmic Accountability

WP29 Guidelines and the GDPR Recitals give an important insight on the interpretation of the provisions on automated decision-making by elaborating on the scope of "meaningful information" and shading some light on the nature of "suitable measures" required to protect legitimate interests as well as freedoms and rights of data subjects.[118] By establishing framework for interpretation of the said terms and relevant provisions, WP Guidelines and the Recitals allow to link the issues underlining automated decision-making as set forth by the GDPR to the problems posed by the YouTube algorithmic systems and decision-making processes.

WP29 has developed a whole set of clarifying statements shaping the perception of "meaningful information" as laid down by Article 13. Firstly, WP29 erases any ambiguity in the potential perception of the meaning of Article 22 as a right to object to automated profiling by proclaiming Article 22 a general prohibition of any decision-making based on automated processing alone.[119] In other words, companies implementing the algorithmic decision-making have an obligation to refrain from performing processing based solely on automated means by default instead of providing users with the possibility simply to object to fully automated processing already in place.[120]

Secondly, WP29 states that one manner of avoiding the application of Article 22 is the existence

[116] Malgieri, Comandé, *supra nota* 110, 245.
[117] Article 29 Data Protection Working Party Guidelines on Automated individual decision-making and Profiling for the purposes of Regulation 2016/679, 3.10.2017.
[118] OJ L 119, 4.5.2016, *supra nota* 1, art 13, p 2(f), art 22, p 3.
[119] Article 29 Data Protection Working Party, *supra nota* 117, 19.
[120] Kaminski, *supra nota* 94, 201.

of meaningful human involvement in automated decision-making.[121] However, the mere existence of the human actor blindly approving every algorithmic decision without clear expertise or insight is not considered meaningful by WP29. In other words, the person monitoring and carrying out the approval or refusal of automated decisions must have "the authority and competence" to perform their task. Additionally, WP29 points out the importance of having access to "all the relevant data"[122] that might be taken into consideration by the human actor in their assessment of decisions. For companies, it means that the presence of a human behind the process alone is not sufficient to avoid the provisions of Article 22.

Thirdly, WP29 and Recital 71 agree on the notion that Article 22 is applicable in cases when automated decision result in "serious impactful effects" on data subjects.[123] The WP29 Guidelines stipulate further that the said effects are considered significant if they "affect the circumstances, behaviour or choices" of data subjects concerned in a "prolonged or permanent" manner or, in some cases, result in "exclusion or discrimination".[124] Furthermore, the WP29 Guidelines contain a list a examples illustrating this statement, among which the most relevant for the scope of this study concern decisions leading to negative impacts on the data subject's financial situation and employment opportunities, including putting them at a position of "serious disadvantage".[125] Respectively, Recital 71 supports the position of WP29 by setting forth its own examples of significant effects that include, among all, fully automated predictions on the data subject's work performance.[126] Essentially, in situations that include, but are not limited to, the individual's working prospects involving the chances of their income and working conditions being affected long-term, companies are barred from using fully algorithmic means of decision-making.

Fourth, WP29 provides a solution to the issues of intellectual property law, arising from potential disclosure of trade secrets by making methods and data involved in algorithmic decision-making available to data subjects.[127] The Guidelines refer to Recital 63 that sets forth the limitation of right of access in cases when rights and freedoms of companies holding intellectual property rights may be affected.[128] However, WP29 notes that the said limitation cannot be perceived as a general rule to justify the refusal of right to access to data subjects but rather used as a proportionality tool.

[121] Article 29 Data Protection Working Party, *supra nota* 117, 21.
[122] *Ibid.*
[123] *Ibid.*
[124] *Ibid.*
[125] *Ibid.,* 22.
[126] OJ L 119, 4.5.2016, *supra nota* 1, recital 71.
[127] Mortier *et al.*, *supra nota* 114, 5.
[128] Article 29 Data Protection Working Party, *supra nota* 117, 17.

Recital 63 that claims the data subject's right to access the controller's systems remotely for the purposes of directly accessing their personal data further supports this statement.[129] Therefore, while the GDPR does provide some safeguards for protection of controllers' corporate secrets and other intellectual property rights, they cannot be used as excuses in concealing methods and data used in automated processing and decision-making from data subjects.

Fifth, the WP29 Guidelines make the scope of necessity of automated decision-making narrow.[130] In other words, the controller utilizing the fully automated means of data processing without human involvement must be able to demonstrate the absolute necessity of their choice and show proof of it being the only means of data processing that allow to achieve the purposes of processing.[131]

Finally, the Guidelines arrive at the matter of "appropriate safeguards" and their interpretation.[132] Essentially, suitable safeguards are included in the text of the GDPR for the purposes of protecting data subjects' rights and freedoms as well as legitimate interests in case any of the exceptions to automated decision-making referred to by points a) and c) of Article 22(2) is invoked.[133] As mentioned earlier in Chapter 3.1, Recital 71 serves as the main source elaborating on the subject matter of suitable safeguards and providing hints on possible interpretation. Particularly, Recital 71 mentions three safeguards: the right to obtain specific information about the automated decision, the right to be provided with an explanation of the decision, or simply the right to explanation, and the right to contest the decision.[134] The WP29 Guidelines acknowledge the said safeguards yet expand the list of available measures by citing Article 22(3) where at least two additional suitable safeguards are found: specifically, the right to human intervention in the algorithmic decision-making and the right of the data subject to express their opinion on the decision.[135]

Here is where the main challenge around the existence of certain rights listed as suitable safeguards arises. While three of the above-mentioned safeguards (human intervention, expression of the data subject's view, and contesting the decision) are directly found in the text of the actual Article of the GDPR and constitute legal provisions, the remaining two (the right to explanation and the right to information) are inferred from the Recital alone. This instance inevitably led to the emergence of discussions among legal scholars on the matter of whether the referral given by Recital 71 is

[129] OJ L 119, 4.5.2016, *supra nota* 1, recital 63.
[130] Article 29 Data Protection Working Party, *supra nota* 117, 13.
[131] *Ibid.,* 23.
[132] *Ibid.,* 27.
[133] Article 29 Data Protection Working Party, *supra nota* 117, 27.
[134] OJ L 119, 4.5.2016, *supra nota* 1, recital 71.
[135] Article 29 Data Protection Working Party, s*upra nota* 117, 27.

sufficient for these two safeguards to be deemed actual rights as the GDPR Recitals are generally non-binding.[136]

3.3.1. The Challenge of Right to Explanation and Importance of Other Suitable Safeguards

In fact, safeguards of Recital 71 may actually be linked to the corresponding provisions of the GDPR, which may be considered a solution to the challenge of insufficient grounds for enforceability. Since Recitals are meant to supplement the corresponding Articles by providing more insight at the scope and meaning of the GDPR provisions, the right to receive "specific information" about an automated decision might not be drastically different from the scope of "meaningful information" of Article 15(2)(h). While it is not mentioned anywhere in the text of the GDPR whether the terms 'specific' and 'meaningful' are to be interpreted as synonymous or rather contextual, the existence of the term in Recital 71 alone allows for the former term to be considered in the interpretation of the latter; in other words, additional meaning given by Recitals to Articles facilitates efficient exercise of rights under the said Articles.[137] This insight becomes particularly important in the light of the debate on the existence of the right to explanation. Among all other safeguards, the right to explanation exists solely in the text of Recital 71 and, while effectively supplementing provisions of Article 22, the wording defining the binding nature of the said right is omitted from the text of Article 22. Thus, the legal scholars divide in their opinion regarding the legally binding nature of the safeguard and whether it may be regarded as a right in general.[138]

One point of view, particularly expressed by Goodman and Flaxman in their paper,[139] presumes the right to explanation is included in the scope of "meaningful information" as stated in Articles 13 and 14 in a form of the duty of the controller to "explain an algorithm's decision".[140] This position is widely supported by a range of legal scholars and respective academic literature. The arguments for the existence of right to explanation include the legal practice of the ECJ that uses recitals as an efficient tool in interpreting relevant provisions of the respective legal acts (such as in *Leventis and Vafias*[141] *C.K. and Others*[142]*)* and the right's inextricability from the right to contest

[136] Malgieri, G. (2019). Automated decision-making in the EU Member States: The right to explanation and other "suitable safeguards" in the national legislations. *Computer Law & Security Review*, 35 (5), 4.
[137] Selbst, A.D., Powles, J. (2017). Meaningful information and the right to explanation. *International Data Privacy Law,* 7 (4), 235.
[138] *Ibid.,* 237.
[139] Goodman, Flaxman, *supra nota* 96, 1.
[140] *Ibid.,* 6.
[141] European Court of Justice decision, 28.6.2017, Leventis and Vafias, C–436/16, ECLI:EU:C:2017:497, point 33.
[142] European Court of Justice decision, 16.2.2017, C.K. and Others, C–578/16, ECLI:EU:C:2017:127, point 43.

decisions as stated in Article 22(3).[143] On the contrary, a much smaller number of scholars arrive at an opposing conclusion regarding the right to explanation, such as Wachter and others. In their paper, the authors make a very bold statement that the right to explanation "does not exist",[144] as do Edwards and Veale, suggesting the existence of the right to explanation but does not deem it a normative rule by default.[145]

Both positions regarding the right to explanation are not flawless;[146] however, WP29 seems to settle on the position of acknowledging the existence of the right to explanation in its Guidelines. WP29 expresses its stance towards the right to explanation rather directly by stating the data subject may be able to invoke their rights to express their point of view and contest a decision only if they have clear understanding of the basis for the decision and means involved in the process of making it.[147] Besides recognition of the right to explanation, the WP29 Guidelines indicate the importance of recognizing the legally binding nature of other safeguards as means facilitating transparency of automated processing. In this regard, WP29 claims that human intervention must be carried out by a reviewer with "the appropriate authority" to uphold or overrule the decision,[148] which, respectively, gives the data subject access to a certain level of transparency.[149] At the same time, the human involvement with the possibility for the data subject to receive meaningful explanation of the decision taken by the algorithmic system allows to fulfil the element of comprehensibility. Alongside with the element of transparency, it suggests that the right to explanation may, in fact, be seen as manifestation of the concept of legibility within the GDPR legal framework.

Finally, the GDPR sets forth the legal framework for another crucial concept that makes "appropriate safeguards" relevant not only with regard to individual privacy rights of the data subject but also in its relationship with the companies that undertake the means of automated processing and decision-making. In their interpretation of the term "appropriate safeguards", the WP29 Guidelines provide explicit emphasis to the role of algorithmic auditing and ethical review boards.[150] The said emphasis suggests that the scope of the Recital is to encompass a concept of

[143] Mendoza, I., Bygrave, L.A. (2017). The right not to be subject to automated decisions based on profiling. In: Synodinou, T., Jougleux, P., Markou, C., Prastitou., T. (Eds.), *EU Internet Law: Regulation and Enforcement* (77─98). Cham, UK: Springer.
[144] Wachter, Mittelstadt, Floridi, *supra nota* 111, 76.
[145] Edwards, L., Veale, M. (2017). Slave to the Algorithm? Why a "Right to an Explanation" is Probably not the Remedy you are Looking For. *Duke Law & Technology Review,* 16, 50.
[146] Kaminski, *supra nota* 94, 205.
[147] Article 29 Data Protection Working Party, *supra nota* 117, 27.
[148] *Ibid.*
[149] Kaminski, *supra nota* 94, 205.
[150] Article 29 Data Protection Working Party, *supra nota* 117, 32.

algorithmic accountability: in other words, the obligations of the data controller to seek and implement solutions for upholding the data subject's access to legibility accompanying automated decisions and avoid discrimination and bias.[151] Algorithmic accountability is specifically important when the controller is involved in automated processing of sensitive data:[152] in this case, preventing bias and discrimination with regards to such personal data as race, religious beliefs, political views, ethnicity, sexual orientation and other[153] requires companies to take an extra step in developing systems ensuring ongoing testing and feedback.[154]

This conclusion is an important piece linking the concept of legibility to algorithmic accountability as an integral part of the scope of the GDPR. With all the above-mentioned in mind, it is now possible to define whether the concepts and legal framework set forth by the GDPR unveils serious shortcomings and issues on the side of YouTube and whether YouTube's compliance with the said principles, provisions and rules is insufficient or even non-existent at all.

3.4. Identifying YouTube's Compliance with the GDPR Provisions on Automated Decision-Making

To meet the purpose stated by the title of this chapter, the author conducted interviews with seven content creators residing in several EU Member States.[155] During the interviews, content creators were asked questions related to their knowledge of YouTube policies and criteria affecting monetization of content, experience regarding obtaining and contesting demonetization decisions as well as their acquaintance with personal data rights under the GDPR. The respondents' answers were recorded and used as a basis for the forthcoming assessment of the diligence of YouTube's compliance as the data controller with personal data rights of content creators as the data subjects. Respondents were primarily selected on the basis of their habitual long-term residence within the EU territory for the purposes of meeting the territorial scope of the GDPR as it meets the scope of the current study.[156] Such factors as creators' age, gender, channel size (i.e. the subscriber count), channel theme, affiliation with multi-channel networks, etc. were specifically omitted and

[151] Kaminski, *supra nota* 94, 205.
[152] Article 29 Data Protection Working Party, *supra nota* 117, 6, 10, 14.
[153] OJ L 119, 4.5.2016, *supra nota* 1, recital 71.
[154] Article 29 Data Protection Working Party, *supra nota* 117, 28.
[155] YouTube content creators from the EU. Author's interview. E-mail, Google Forms. January–February 2021.
[156] Despite being of little relevance to the subject matter of the study, it is nevertheless worth mentioning that the selected content creators represent at least several YouTube communities. Content they produce encompasses such topics of focus as beauty and lifestyle, gaming, education and historical dress.

disregarded in the selection of respondents for purposes indicated in the introduction to the study.

First, content creators were asked to evaluate their labour relationship with YouTube. All seven YouTubers indicated that they consider themselves self-employed and working as content creators full-time. Next, the author evaluated the concept of legibility with regard to real-life experiences of content creators: in other words, determined how they perceive transparency and comprehensibility of the algorithmic systems on YouTube. Content creators were asked several questions regarding the major YouTube policy sets affecting and related to management of personal data and automated processing, including Community Guidelines,[157] Terms of Service (ToS),[158] Copyright Policy[159] and Google AdSense Policy.[160] The respondents were first asked whether they considered YouTube policies transparent, fair, and/or easy to read and understand for someone without professional legal training.[161] Five of the seven respondents answered negatively to all three statements. One content creator considered YouTube policies transparent enough and easy for perception but disagreed on their fairness. Only one of the seven respondents agreed to all three statements.

Furthermore, when questioned on what set(s) of policies could be considered the most important for monetization and promotion of content, four respondents mentioned Community Guidelines and three—Copyright Policy. At the same time, the question on whether they considered certain policies and rules irrelevant or unimportant to decisions affecting monetization resulted in a range of rather ambiguous answers. One respondent replied that even though they had previously opted for the Community Guidelines as the policy most affecting monetization decisions, they did not see it affecting their content due to its rather 'neutral' nature. Another respondent noted that they could not answer the question definitely due to the inconsistency in the application of rules: "the rules change from video to video".[162] The said replies showed some evidence on the lack of full transparency in the YouTube policies as some of the interviewed creators could not determine whether they could rely on the said rules when producing content that would not result in demonetization decisions.

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[157] *Community Guidelines.* YouTube. Retrieved from https://www.youtube.com/intl/en_us/howyoutubeworks/policies/community-guidelines, 8 March 2021.
[158] *Terms of Service.* YouTube. Retrieved from https://www.youtube.com/static?gl=GB&template=terms, 8 March 2021.
[159] *Copyright.* YouTube. Retrieved from https://www.youtube.com/intl/en_us/howyoutubeworks/policies/copyright, 8 March 2021.
[160] *AdSense Program policies.* AdSense Help. Retrieved from https://support.google.com/adsense/answer/48182?ctx=checklist, 8 March 2021.
[161] *Supra nota* 159.
[162] *Ibid.*

Moreover, when asked whether they had ever reached out to YouTube with the request to disclose the criteria that affect monetization and what YouTube's response was, content creators' replies varied drastically. Three respondents noted that YouTube was very clear about the breached rules, identifying the issues that led to the negative decision, such as copyrighted music and sensitive historical content. On the other hand, two respondents experienced completely different treatment from YouTube, stating that YouTube explains the reasons for demonetization only vaguely and never pinpoints a particular issue. Therefore, these responses reinforce the earlier statement that YouTube policies and rules create insufficiently transparent grounds for content creators to make effective decisions regarding their content with regard to monetization.

In a state of inadequate level of transparency, six of the seven content creators admitted that they found themselves refraining from executing a certain idea or project due to the fear that the final video would be demonetized and developing certain practices to "trick the system". One of the creators the author interviewed was particularly extensive in describing the said practices which allowed for insight at how they perceive the system they are trying to go around. Having a channel dedicated primarily to gaming, the content creator noted the change in the behaviour of the algorithmic systems based on the choice of the game they play in their videos. Particularly, they often witnessed unexpected demonetization decisions whenever they made content featuring 'Grand Theft Auto Online'—a video game rated as Mature by the Entertainment Software Rating Board for its explicit depiction of blood and gore, intense violence, nudity, sexual content, etc.[163] They further explained that the algorithm often recognizes female character models dressed in revealing outfits as sexual content which leads to demonetization.[164] However, when the creator tried to conceal the models with black bars, the demonetization status was still upheld as the algorithm recognized black censor bars as an attempt to disguise pornographic material.[165] This experience led the creator to believe that deleting a problematic clip from the video might be more effective against the logic of the algorithm than attempting to censor it. This example demonstrates that in the lack of transparent guidelines and assistance from YouTube in matters of algorithmic decisions affecting monetization of content, content creators develop their own comprehensibility of the algorithm, undertaking personalized practices through trial and error to avert potential demonetization.

[163] *Grand Theft Auto V.* ESRB. Retrieved from https://www.esrb.org/ratings/33073/Grand+Theft+Auto+V, 9 March 2021.
[164] *Nudity and sexual content policies.* YouTube Help. Retrieved from https://support.google.com/youtube/answer/2802002?hl=en&ref_topic=9282679, 9 March 2021.
[165] *Supra nota* 159.

Next, the author sought to evaluate YouTube's compliance with the GDPR provisions on the basis of the interpretation of relevant Articles and Recitals assessed in Chapter 4.3, particularly YouTube's commitment to provide content creators with means of accessing appropriate safeguards in the light of the algorithmic decision-making on the platform. First, all seven content creators were questioned on the subject of their awareness of the automated means by which YouTube assesses content for suitability for advertisers and detects copyrighted materials.[166] Only four of the respondents answered positively to this question. Then, the respondents were asked to choose between a fully human-controlled, fully automated and a combination of human-involved and automated means as the most efficient manner of decision-making on YouTube. The majority of five respondents opted for the combination of automated and human-controlled review, while among the other two creators one opted for a fully human-controlled review and one – for a fully automated review.

The author proceeded to asking questions on the matter of contesting decisions and the role of human intervention in the automated decision-making as suitable safeguards YouTube should provide in the light of the otherwise fully automated review. The content creators were asked of whether they have ever requested a human review in appeal of the negative decision of demonetization of content, to which four answered positively. Among them, all four creators specified that the human review has at least once resulted in a negative decision being overruled and monetization granted. Therefore, it indicates that YouTube does provide a possibility of contesting a negative automated decision and request human intervention in the algorithmic decision-making process; however, the mere existence of this possibility is not sufficient to the scope of the GDPR and requires a competent expert to carry out the assessment.[167]

Interestingly to this matter, one content creator assumed that the algorithm does not always base its decisions on the publicly available list of criteria contained in YouTube policies but implements such undisclosed factors as names of "problematic" YouTubers or topics.[168] Nevertheless, they noted that the algorithm might not be at fault, as they believe the algorithmically approved content might be additionally moderated by human reviewers that make demonetization decisions based on the above-mentioned undisclosed list of criteria. Two creators indicated that on several occasions, human reviewers did not follow the YouTube policies when upholding demonetization status and, therefore, they do not consider their assessment results credible. One of the respondents

[166] *Ibid.*
[167] Article 29 Data Protection Working Party, *supra nota* 117, 21.
[168] *Supra nota* 159.

elaborated further on this issue: they explained that one of the rules obliges the YouTuber to refrain from using strong language "at the beginning of the video",[169] where the term 'beginning' is interpreted as exactly the first 30 seconds of the video.[170] Yet, during the human review of a video demonetized by the algorithmic system for allegedly breaching this rule, the human expert upheld the automated decision even though the content creator claimed the video contained no profanity whatsoever over the entire duration of the video.[171] This leads the author to the conclusion that the experts provided by YouTube as means of human intervention in the automated decision-making perform their task with insufficient involvement and demonstrate incompetence in some instances.

The next examples uphold the said statement while elaborating on YouTube's compliance with the remaining three safeguards of right of the data subject to express their opinion about the automated decision, the right to explanation, and the right to receive specific information about the decision. Four of the interviewed creators noted that YouTube provided them with no means of directly contacting the reviewers that had upheld negative automated decisions to discuss their reasoning behind the review or express the creators' opinion on what decision should have been made.[172] One content creator specified that instead of receiving specific information about the decision from the human expert, YouTube implemented a system of 'self-checks' during the video upload. Particularly, whenever the content creator uploads a video, they are presented with the list of demonetization criteria that range in severity from none to major. A content creator may then tick a box near the relevant sensitive element that their video may potentially include: e.g. "mild erotic content". If the algorithm demonetizes the video and it is then submitted for human review, the expert ticks the boxes on their side (e.g. "major erotic content") and the results are then presented to the content creator as explanation of the human reviewer's decision. Therefore, the only feedback available to the content creator is a comparison of the choices made by them and the reviewer.

In the author's opinion, this means cannot be considered an adequate explanation in the scope of the GDPR as the self-check feature forces both creators and reviewers to choose among the limited and generalized list of demonetization factors derived from YouTube policies. Such terms as 'minor', 'major', 'mild', 'strong', etc. used for evaluating the severity the sensitive factors cannot

[169] *Advertiser-friendly content guidelines.* YouTube Help. Retrieved from https://support.google.com/youtube/answer/6162278?visit_id=637508848354597195-1942971921&rd=1, 9 March 2021.
[170] Binder, M. (2019). *Damn and hell are fine on YouTube. Here's what you can't f**king say.* Mashable. Retrieved from https://mashable.com/article/youtube-profanity-monetization-guidelines, 9 March 2021.
[171] *Supra nota* 159.
[172] *Ibid.*

be relied upon without further explanation of details as these terms are rather vague and may be interpreted differently based on the circumstances of the particular case. Due to the same reasons, this system cannot be considered as providing specific or meaningful information about the decision. Neither does the feature comply with the concept of algorithmic accountability as without specific information and explanation the decisions made within such a generalized framework of criteria are prone to bias and discrimination.

Finally, content creators were asked their opinion about the creation of a mediation board for dispute resolution as an alternative to the existing system of contesting decisions implemented by YouTube. Four creators answered positively, while three saw no benefit in such an initiative. When asked who they would rather see represented in such a mediation board, four respondents favoured the inclusion of other YouTubers as representatives of the community. Other than that, content creators also mentioned legal professionals and experts with experience in working with advertisers as potentially favourable candidates.

Overall, the interviews with content creators unleashed some serious internal problems in YouTube's compliance with the relevant provisions of the GDPR on automated decision-making and providing suitable safeguards to data subjects that are directly affected by decisions taken by YouTube's algorithmic systems. Taking these conclusions into account, it is now possible to assess whether the identified problems may be solved. In the next chapter, the author evaluates the solutions presented in the academic literature, legal practice, and existing legislation of the EU Member States to suggest some of the potentially plausible solutions to these challenges.

4. SEEKING THEORETICAL AND PRACTICAL SOLUTIONS

Before exploring available remedies, the author notes that the core importance of this chapter is to demonstrate solutions that are "meaningful" to a human and especially to a non-expert. The academic literature presents a vast variety of studies suggesting solutions to automated decision-making from a multitude of angles, yet most of them are only feasible to experts in machine learning and computer science, which is not the remedy the author seeks. Additionally, the author supplements each proposed remedy with examples of its practical implementation relevant directly to YouTube.

4.1. Counterfactual Explanations: Proposing Actions

The study has in numerous contexts pointed out the issue of the human actors' perception of the algorithm and how the said issue is reflected in the current situation with YouTube algorithmic systems and the GDPR. Therefore, it is reasonable to assume that any solution to the issue of transparency and comprehensibility of the algorithm should be solved by providing data subjects with means allowing them to understand the algorithm. However, merely understanding how algorithm operates does not particularly resolve the data subject's concerns of how their initial goal could be reached or what actions need to be taken in order to achieve the desirable outcome.[173] Therefore, a model of counterfactual explanations suggests a solution that directs the data subject to specific actions necessary for the achievement of favourable output. The model of unconditional counterfactual explanations implements an additional feature that distinguishes it from more commonly acceptable forms of explanation. Unlike explanations facilitating perception of the algorithm that generally provide data subjects with means to understand and contest the decision, the model of counterfactual explanations includes a third advisory element, explaining possible

[173] Wachter, S., Mittelstadt, B., Russell, C. (2018). Counterfactual Explanations without Opening the Black Box: Automated Decisions and the GDPR. *Harvard Journal of Law & Technology,* 31 (2), 843.

steps or actions the data subject may take to obtain a desirable decision.[174]

The said solution offers a range of positive implications from both technical and legal points of view.[175] From a technical standpoint, counterfactual explanations serve as a tool tailored specifically to the practical needs of data subjects, a great number of which may not be skilful in the art of computer science and machine learning. While explaining the functioning of the algorithmic systems may be feasible for understanding the internal logic of the algorithm, this information may also be of little use to data subjects if they are unable to use it effectively in practice.[176] On the contrary, counterfactual explanations perform this task for the data subject by offering them both the reasons behind a particular decision *and* options of adjusting the data subject's behaviour to meet their goal.

From a legal standpoint, counterfactual explanations ease the burden of interpretability of the GDPR provisions on automated decision-making and, specifically, the suitable safeguards.[177] Particularly, this approach may potentially become a key to tackling a challenge of providing data subjects with the "meaningful information about the logic involved in a decision-making"[178] as "meaningful information" in the case of machine learning and algorithmic systems may be too complex to translate to the data subjects given the limitations of the GDPR.[179] While machine leaning systems derive their decisions on the basis of deeply interconnected networks with hundreds of stacked layers containing millions of parameters regulating their behaviour,[180] the question arises of whether such complexity may be efficiently broken down to meaningful information at a level of humanly possible comprehension.[181] Counterfactual explanations, on the other hand, suggest that this challenge may be bypassed as providing the data subject with the overview of possible actions corresponds to the specific requirements of the GDPR on the right to receive "meaningful information" while keeping the explanation of the algorithmic rationale at a bare necessity required for the data subject's comprehensibility.[182]

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[174] *Ibid.,* 844.
[175] *Ibid.,* 860.
[176] Burrell, J. (2016). How the machine 'thinks': Understanding opacity in machine learning algorithms. *Big Data & Society,* 3 (1), 9.
[177] Wachter, Mittelstadt, Russell, *supra nota* 173, 861.
[178] OJ L 119, 4.5.2016, *supra nota* 1, art 15, p 1(h), art 22.
[179] Kuner, C., Svantesson, D.J.K., Cate, F.H., Lynskey, O., Millard, C. (2017). Machine learning with personal data: is data protection law smart enough to meet the challenge? *International Data Privacy Law,* 7 (1), 1─2.
[180] He, K., Zhang, X., Ren, S., Sun, J. (2016). Deep residual learning for image recognition. In *Proceedings on the IEEE conference on computer vision and pattern recognition,* June 27–30, Las Vegas (770–778), IEEE, New York, USA, 770.
[181] Burrell, *supra nota* 176, 9.
[182] Wachter, Mittelstadt, Russell, *supra nota* 173. 861.

In the context of YouTube, counterfactual explanations may be implemented as an alternative to the existing feature of self-checks mentioned by one of the interviewed content creators.[183] Human reviewers may instead outline steps on how demonetized content may be altered or improved to avoid demonetization. For example, checking a "major erotic content" box means, "Your content was demonetized because your video contained major erotic content". It leaves the creator guessing what they did wrong and how to fix the video (such as perfectly demonstrated in the example with the content creator making Grand Theft Auto Online content).[184] Instead, every ticked box should be complemented with a counterfactual explanation, e.g., "if you had omitted or removed clips depicting characters in exposed outfits from your video, your content would have been monetized".

4.2. Decoupled Explanations: Providing Algorithmic Reasoning

The wording of the right to obtain "meaningful information" specifically emphasises the algorithmic logic as a subject to explanation.[185] Therefore, some models of explanation of the logic involved in automated decisions specifically deconstruct the processes behind how machine learning and algorithmic systems turn inputs into outputs.[186] However, without sufficient competence in computer science and deliberate omitting of crucial technical details such as the source code, inputs and outputs,[187] the model touches upon a surface-level trace of the complete logic.[188] As a manner of making the explanation models more perceptible by non-expert data subjects, some scholars suggested that explanation should elaborate on the algorithmic reasoning instead of internal algorithmic operation, thus separating two concepts into independent, or decoupled, models.[189]

Decoupled algorithmic explanations come in two main forms of decompositional and pedagogical explanations.[190] Decompositional explanations are derived from deconstructing the algorithmic system into separate elements of which it is comprised, such as weights, decisions trees, and

[183] YouTube content creators from the EU. Author's interview, *supra nota* 155.
[184] See Chapter 3.4.
[185] OJ L 119, 4.5.2016, *supra nota* 1, art 15, p 1(h), art 22.
[186] Edwards, Veale, *supra nota* 145, 64.
[187] Kroll, J.A., Barocas, S., Felten, E.W., Reidenberg, J.R., Robinson, D.G., Yu, H. (2017). Acoountable Algorithms. *University of Pennsylvania Law Review,* 165 (3), 638.
[188] Edwards, Veale, *supra nota* 145, 64.
[189] Wick, M.R., Thompson, W.B. (1992). Reconstructive expert system explanation. *Artificial Intelligence,* 54 (1—2), 35.
[190] Edwards, Veale, *supra nota* 145, 64.

architecture, and determining the patterns of their influence. Pedagogical explanations, on the other hand, do not require deconstruction of the algorithm in order to derive reasoning as they are based on the information obtains by simple means of querying it.[191]

Out of the two, the latter model of explanations constitutes a more favourable option given the scope of the GDPR and YouTube automated processing challenge for a number of reasons. Firstly, the difference of deriving information for explanation plays a crucial role with regard to the challenge of accidental or unwanted disclosure of IP rights due to which some companies refrain from providing data subjects with explanation of decisions.[192] As the model of decompositional explanation requires access to deeper and broader structures of the algorithmic systems than the pedagogical explanation model, the former presents a greater risk of unintentionally revealing trade secrets pursuant to Article 15(h) of the GDPR.[193] Since the pedagogical model is able to derive information by querying the algorithmic systems, the risk for the companies with regard to their IP rights decreases gradually as querying provides information sufficient for a feasible explanation to the data subject but nearly not as sufficient to potentially reverse-engineer or rebuild the algorithmic system.[194] As a result, companies may develop various tools and methods or querying the systems, such as application programming interfaces (API) that allow remote access to low levels of algorithmic system structures and may be better understood by non-expert data subjects.

At a practical level, YouTube does have APIs that allow developers to write applications interacting with YouTube.[195] The current YouTube APIs are designed for two distinct sets of purposes, namely for: a) utilizing the functionality and the playback experience of the YouTube video player on websites and in apps (the Player API),[196] and b) integrating YouTube functionality including the possibility to manage videos, playlists, and streams, into apps and accessing analytics data (the Data and Analytics APIs).[197] On the one hand, the practical advantages of using the YouTube APIs may seem rather irrelevant to non-expert users not able to utilize properties of API metrics, or resources effectively by means of writing a code. However, some examples suggests

[191] *Ibid.,* 65.
[192] Mortier *et al., supra nota* 114, 5.
[193] OJ L 119, 4.5.2016, *supra nota* 1, art 15(h).
[194] Edwards, Veale, *supra nota* 145, 65.
[195] *Add YouTube functionality to your sites and apps.* Google Developers. Retrieved from https://developers.google.com/youtube, 20 March 2021.
[196] *YouTube Player API Reference for iframe Embeds.* Google Developers. Retrieved from https://developers.google.com/youtube/iframe_api_reference, 20 March 2021.
[197] *YouTube Data API Overview.* Google Developers. Retrieved from https://developers.google.com/youtube/v3/getting-started, 20 March 2021.

otherwise. For example, the Analytics API allows regular channel owners to access video and playlist reports that may help them form perception of how well their videos are promoted by the algorithm and in what dimensions.[198] Additionally, individuals skilful in coding and app development may facilitate awareness of the algorithmic logic and among non-experts by creating articles and blogposts highlighting in more commonly comprehensible language the knowledge they have derived from the use of metrics in their own apps and algorithms as experts. Moreover, they may additionally provide means to tackle the challenges of the algorithmic systems by sharing their own tools and code with the public. Such was the case, for instance, with a data scientist that used the YouTube APIs to create their own personalized recommendation algorithm by analysing the metrics that influence the original YouTube recommender system and publishing a step-by-step guide[199] and a final code[200] for further implementation.

4.3. "Big Data Due Process": a Shift from the GDPR Safeguards

The next potential solution takes a step away from the limitations of the GDPR and looks at the challenge from the point of view not inherently familiar to the personal data protection regime in the EU. Here, it is important to remind that the GDPR puts great emphasis on the rights of data subjects as individuals, granting them similarly individual rights that they may invoke at their own discretion, more often than not unsuccessfully.[201] However, not all the legal systems implement the similar approach into their own regimes of personal data protection, the US being one of the most prominent examples. Unlike in the EU, consumers in the US undertake a collective rather than individual remedy of class action litigation, implying that collective legal action has a greater chance of receiving attention from critically understaffed and underfunded data protection authorities than individual claims.[202]

A concept of "Big Data Due Process" presents a solution modifying due process with methods facilitating understanding, transparency and accountability of automated systems implemented at

[198] *Get the Most Out of Your Data.* Google Developers. Retrieved from https://developers.google.com/youtube/analytics, 20 March 2021.
[199] Lovejoy, C. (2020). *I created my own YouTube algorithm (to stop me wasting time).* Towards Data Science. Retrieved from https://towardsdatascience.com/i-created-my-own-youtube-algorithm-to-stop-me-wasting-time-afd170f4ca3a, 20 March 2021.
[200] Lovejoy, C. (2021). *Valuable YouTube Video Finder.* GitHub. Retrieved from https://github.com/chris-lovejoy/YouTube-video-finder, 20 March 2021.
[201] Edwards, Veale, *supra nota* 145, 74.
[202] *Ibid.,* 75.

the governmental level and encompassing data subjects as a group rather than distinct individuals. A number of measures have been suggested to adapt due process to the nature of algorithmic systems,[203] including:

1. creating a notification system to data subjects, notifying them every time an automated decision involving their personal data is made and offering a possibility of judicial review;[204]
2. educating government officials about the errors and biases of automated systems and automated decisions;[205]
3. hiring experts, whose primary task is to document findings generated by automated means and explain the reasoning behind them when making administrative decisions;[206]
4. testing implemented automated systems for bias and error.[207]

Since the scope of the GDPR extends to both public and private sectors,[208] YouTube must comply with its provisions as a US-based controller related to processing the EU-based data subjects[209] as a service facilitating self-employed economic activities,[210] to which video streaming services such as YouTube relate on the basis of the scope derived by the GDPR from Directive 2006/123/EC.[211] Therefore, YouTube must demonstrate compliance with the GDPR provisions to the same extent as any EU-based company without specifically reserved exceptions.[212] In other words, YouTube as a private company may potentially be forced to implement one or more of the above-mentioned measures as the scope of the GDPR does apply to the private field. As a way to achieve the requirement of continuous testing of systems for discrimination, bias, error and fallacies, human reviewers of YouTube must be able to distinguish between regular facts and system-generated facts themselves before explaining them to YouTubers. Therefore, to facilitate technologically sound due process, YouTube should educate human reviewers about the basics of their algorithmic systems to make the experts aware of what constitutes the said difference.

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[203] Citron, D.K. (2008). Technological Due Process. *Washington University Law Review,* 85 (6), 1301.
[204] *Ibid.,* 1305.
[205] *Ibid.,* 1306.
[206] *Ibid.,* 1307.
[207] *Ibid.,* 1310.
[208] Edwards, Veale, *supra nota* 145, 76.
[209] Klar, M. (2020). Binding Effects of the European General Data Protection Regulation (GDPR) on U.S. Companies. Hastings Science and Technology Law Journal, 11 (2), 102.
[210] *Ibid.,* 112.
[211] Directive 2006/123/EC of the European Parliament and of the Council of 12 December 2006 on services in the internal market, OJ L 376, 27.12.2006, p 36─68, art 4, p 1.
[212] Klar, *supra nota* 209, 141.

4.4. Agonistic Machine Learning: Ensuring Pluralistic Computability and Legally Justifiable Explanations

The final solution proposed in this thesis approaches the challenge by looking at it from a perspective of human identity, particularly, its computability. The are many debates about how machine learning and algorithmic systems affect such complex aspect as human identity, yet a large share of studies supports the idea that human identity may be computable to a certain degree, meaning that some aspects of our identity are predictable and prone to calculation.[213] However, an alternative point of view suggests that human essence is completely incomputable, implying that human identity is comprised of a plurality of aspects and shaping factors that cannot be computed is a uniform, single manner. Proper functioning of algorithmic systems depends on the constant flow of data, among other things, which is achieved by configuring and re-configuring their data-driven environment to adjust them to the input of data.[214] As algorithmic systems derive such data from human actors, humans themselves become the environment to be reconfigured for a steadier flow of data, which leads to the incomputable complexity of human identity to be simplified to fit the limitations of computable data-driven systems. This simplification affects not only the notion of human identify as such but the concept of personal data as well, shrinking it substance to what essentially fits in the computable model and leaving some of the more flexible and mindful aspects of privacy that might not necessarily fit in the model, outside of its reach.

The said challenge is especially relevant to companies such as YouTube that implement algorithmic systems for decision-making and may be potentially used as a solid argument to object and stand against any form of algorithmic decision-making in the private field. However, the approach under the name of agonistic machine learning presents a potential solution to this challenge by presuming that the inherently incomputable human self may be turned into computable.[215] This approach implies human identity may indeed be calculated without sacrificing its complexity if the algorithmic systems implement many different ways of processing data of the same person. In other words, it suggests algorithmic systems should be designed to refrain from processing behavioural data on the basis of the "true" model representing a person (agnostic

[213] Hildebrandt, M. (2019). Privacy as Protection of the Incomputable Self: From Agnostic to Agonistic Machine Learning. *Theoratical Inquiries in Law,* 20 (1), 86.
[214] *Ibid.,* 105.
[215] *Ibid.,* 106.

machine learning) to using any bias found over the course of their training to perform rigorous testing of the said bias for being unfair, erroneous or discriminating.[216]

This remedy is also efficient in drawing a line between seemingly similar GDPR safeguards of right to explanation and right to obtain "meaningful information" about the decision and the legal justification of the decision.[217] In case the automated decision implies grave bias, giving the said bias as a reason behind an automated decision does not automatically make it legally justified. In the context of fully automated decisions, the legal justification may differ in each Member State depending on the GDPR implementation law and may be significantly limited to such exceptions as provision of insurance services in Germany [218] and fulfilment of public task in the Netherlands.[219] However, such criteria as political preferences, race and gender are discriminate; therefore, explaining why the algorithmic system used these data for the decision would not legally justify it, as seen from the examples above.[220]

As a company employing algorithmic systems, YouTube may undertake the solution of agonistic machine learning by seeking and implementing more than one algorithmic system that models and processes data on data subjects and actions related to them. This remedy may also be achieved by employing specialists to point out biases and relevance of the outputs. Alternatively, this task may be vested in a non-governmental organization or a specialized non-profit organization pursuant to the right of representation of data subjects.[221]

[216] *Ibid.*
[217] *Ibid.,* 118.
[218] Bundesdatenschutzgesetz vom 30. Juni 2017 (BGBl. I S. 2097), Section 37.
[219] Uitvoeringswet Algemene verordening gegevensbescherming, geldend van 01-01-2020 t/m heden, art 40.
[220] Hildebrandt (2019), *supra nota* 213, 118.
[221] OJ L 119, 4.5.2016, *supra nota* 1, art 80, p 1.

5. FAIRTUBE NOW: FUTURE DEVELOPMENTS ON YOUTUBE AND THE FATE OF ALGORITHMIC DECISION-MAKING

As seen so far, the issue of automated decision-making on YouTube is complex and multi-dimensional as it encompasses a multitude of factors and scientific fields such as law, computer science, and machine learning. This is a crucial statement to keep in mind while discussing the future of the algorithmic systems and their influence on YouTube and YouTubers. As there is no definite answer to the question of what direction YouTube will take with regard to their stance towards algorithmic decision-making and overall reliance of the platform on the algorithmic systems, some predictions may be made nevertheless.

In late 2020, the cooperation between the YouTubers' Union and IG Metall took a more formal turn as the formerly informal joint venture was transformed into FairTube e.V. Association.[222] While its mission has broadened and now concerns fairness, transparency, equality, rights and freedoms of all platform workers including YouTubers but not limited to them,[223] its demands have not changed drastically since 2019 when they were first announced in a formal letter to YouTube. Even though YouTube showed little willingness to cooperate with the trade unions and dismissed the YouTubers Union's attempts to be included in the formal negotiations, in the recent months the platform has reportedly taken steps towards improving the situation and implementing some demands.[224] For instance, the rules affecting monetization and copyright claims were made public at last while content creators were given more means and tools to contact YouTube employees directly.[225] However, YouTube and FairTube continue to disagree on the platform's current policies regarding placement of advertisements on videos uploaded by small channels, as YouTube refused FairTube's proposal to start paying small creators a share of ad revenue. Therefore, while

[222] *FairTube e.V. launch and important video!* (2021). FairTube. Retrieved from https://fairtube.info/blog/fairtube-e-v-launch-and-important-video/, 21 March 2021.
[223] *Our Mission.* FairTube. Retrieved from https://fairtube.info/mission/, 21 March 2021.
[224] *Supra nota* 222.
[225] *Ibid.*

YouTube shows some compliance with FairTube's current and former demands, this compliance is by no means complete and may still be enhanced in certain dimensions.

From the perspective of the challenges of algorithmic decision-making on YouTube assesses by this study, the recent developments undertaken by YouTube still seem rather ambiguous. On the one hand, by revealing the precise criteria affecting monetization, YouTube demonstrated acknowledged the shortcomings in transparency of decisions made by its algorithmic systems; yet, the author considers this change the first step in a journey that requires many more. Such problems as inadequate level of human expertise and involvement, the lack of consistent testing of systems of bias and discrimination, insufficient provision of explanations and meaningful information about decisions to content creators are only few of a whole number of the GDPR-related issues identified by this study that remain unaddressed until this day. Therefore, YouTube's compliance with the key provisions and safeguards of the GDPR on automated decision-making and profiling remains rather poor. Considering that the GDPR entered into force in 2018, the platform was expected to have adjusted its policies and processed related to automated decision-making and profiling at the time of commencing this study in early 2021. However, three years after the GDPR has taken legal effect and two years after the announcement of the FairTube demands, YouTube is still only expected to introduce necessary amendments. As a result, the author has serious reasons to doubt YouTube will demonstrate adequate compliance with the GDPR requirements on automated decision-making in the nearest future.

To evaluate this conclusion, the author reached out to FairTube for a comment. Regarding the author's prediction about YouTube's insufficient compliance with the GDPR provisions and the lengthy process of implementing effective measures to safeguard content creators from the ill effects of the current system of algorithmic decision-making, FairTube's representative Mariya Vyalykh noted that YouTube's compliance is only a matter of time.[226] She further explained that the association has been successful in the past years in "gathering the community and the press around the issue".[227] In the author's opinion, this comment implies that the pace at which YouTube implements necessary changes might not matter to FairTube as much as consistent and thorough representation of content creators' rights and continuous engagement with YouTube and media in terms of drawing attention to the issue. Similarly, Ms. Vyalykh stated that FairTube's previously expressed eagerness to initiate legal action against YouTube for the GDPR violations[228] is no

[226] Mariya Vyalykh, FairTube e.V. Community Manager. Author's interview. E-mail, 26 March 2021.
[227] *Ibid.*
[228] Sprave, J. (2019, Feb 25). Inquiry to the Irish Data Protection Commission under the EU General Data Protection Regulation. [Blog post]. Retrieved from

longer a priority.[229] Although FairTube does not entirely dismiss the option of a legal process, the association currently favours the path of addressing issues and seeking solutions as they appear. As a final note, Ms. Vyalykh added that FairTube is nevertheless ready to turn to more serious means, including the legal action if the association deems such measures necessary to aid their members.

Overall, the question of what fate awaits algorithmic decision-making on YouTube remains without a definite answer. The author assumes that, perhaps, open-ended answers might actually reveal more perspectives of possible solutions and developments in this issue. Assuming that YouTube will change its well-established algorithmic processes overnight is unreasonable, and so is the consideration that the legal action is the only effective way to pressure YouTube into making changes. While the combination of means of public pressure, media coverage and working with data protection authorities undertaken by FairTube among other measures might not be the swiftest or the most effort-efficient manner of advocating for content creators' personal data rights, the recent development have demonstrated the ability of this approach to deliver positive results. Indeed, as FairTube Community Manager said in her interview, it might be a matter of time before YouTube introduces more measures to tackle the problems presented currently by its automated systems.

https://www.facebook.com/groups/youtuberunion/permalink/693434414385864, 28 March 2021.
[229] Vyalykh, *supra nota* 226.

CONCLUSION

The thesis examined the violations of personal data rights of YouTube content creators as data subjects under the GDPR resulting from the algorithmic decision-making on YouTube and explored possible solutions to the identified shortcomings. To obtain the results required to achieve the aim facilitated by the research, the author sought answers to the research questions indicated in the introduction to this study. The following section elaborates on the results attained over the course of conducting the research.

Despite being an algorithmic system, the YouTube recommender algorithm cannot be perceived as a fully automated entity due to its interactive nature with human actors. By engaging with both content creators and regular viewers, the recommender algorithm's behaviour and predictability alters with regard to human interactions and users' activities on YouTube. Therefore, the YouTube recommended algorithm constitutes a combination of human and technical elements that are influenced by each other. As a result of its dualistic nature, the recommender algorithm is prone to the ill effects of the "algorithmic regulation", or making decisions about human behaviour on the basis of the line of the code alone. The consequences of such a process that often leads of discrimination, violations of privacy, human dignity, transparency and fairness are the reasons why algorithmic decision-making is of particular importance to the rule of law.

As content creators fall under the definition of false self-employed in the light of the ECJ ruling in *FNV Kunsten,* their activities on YouTube are legally recognized by the EU law as platform work. The legal status of a worker allows YouTubers access to collective rights, including collective consultation and bargaining as well as protection of trade unions. The latter right invoked by the joint action of two trade unions, IG Metall and the YouTubers Union, resulted in the FairTube campaign, launched as means of protecting YouTubers from the negative effects of the intrusive nature of the YouTube algorithmic systems and the automated decision-making and facilitating the change on the platform.

Among other demands issued in a formal letter to YouTube, the trade unions required YouTube to comply with the GDPR provisions on automated decision-making and profiling. More particularly,

the trade unions demanded YouTube to disclose the criteria affecting demonetization of videos and promotion of content by the recommender system, to provide explanations to algorithmic decisions, to assign human reviewers and contact persons for communication with content creators and to allow content creators to contest negative decisions. In order to determine whether the above-mentioned violations of the GDPR provisions on automated decision-making have taken place, the author defined the legal basis for automated decision-making in the GDPR framework, including the interpretation and safeguard of the relevant provisions, and demonstrated the evidence of the said violations in a series of interviews with the selected content creators.

The interviews with content creators provided sufficient evidence to support the hypothesis that YouTube's compliance with the GDPR requirements on automated decision-making and profiling is indeed, inadequate. The data gathered by the author as a result of the interviews detected serious issues in transparency of algorithmic processing, YouTube policies determining the said processing and the criteria affecting the monetization decisions, as well as insufficient compliance with appropriate safeguards, including the mechanism of contesting negative decisions, providing the human review, expressing their opinion about the decision issued, receiving the explanation and being presented with the specific information about the decision.

The results derived so far in the research have been employed to develop a set of available remedies to the identified shortcomings and bring YouTube's compliance with the relevant GDPR provisions to a more acceptable level. Each of the said remedies were supplemented with examples of their practical implementation into the current structure of YouTube's operation.

Finally, as the cornerstone challenge subject to this research is still ongoing, the author outlined the possibilities of its further development as well as the course of action that may potentially be undertaken by both YouTube and the FairTube e.V. Association (the formal successor of the FairTube campaign). The results of this assessment are by no means definite; yet both YouTube and FairTube e.V. are said to be working together to prevent YouTube's further violations of the GDPR provisions on automated decision-making and develop steps to remedy the already existing issues.

As a concluding remark, the author finds it necessary to mention that the limitations indicated in the introduction to this study allowed the author to focus on a mere share of issues relating to the protection of personal data currently unfolding on YouTube. While the author deliberately opted to focus on the challenges of algorithmic systems and automated decision-making on YouTube and its ill effects on content creators, this study has not addressed other violations of personal data

rights under the GDPR by YouTube, such as right of access, right to information, right to rectification and others. The author believes that by examining the legal nature of this ongoing issue may open the possibilities for further, perhaps more in-depth legal research not only on the matter of automated decision-making on YouTube but also matters purposely omitted from the scope of this research, as the problems they present remain relevant, timely and scarcely researched.

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APPENDICES

Appendix 1. Author's interview and survey questions to content creators

- Do you consider yourself a full-time content creator?
- Do you consider yourself self-employed?
- Which one(s) of the following YouTube monetization policies have you got acquainted with? Please pick one or more.
- Are you aware of the criteria that affect the monetization of content on YouTube?
- In which policies do you usually find the criteria that affect monetization?
- Which one(s) of the following statement(s) do you agree with? Please pick one or more.
    - YouTube monetization policies' rules are transparent enough
    - YouTube monetization policies are fair
    - YouTube monetization policies' rules are easy to read and understand for someone without professional legal training
- In your opinion, what is the most important policy with regard to content monetization?
- Are there rules you do not consider crucial when it comes to monetization (i.e. they tend not to affect the monetization of your content)?
- Knowing that the violation of certain rules will most likely get your content demonetized, have you ever developed certain practices to go around/compromise these rules? Did you manage to trick the system this way?
- Have you ever found yourself refraining from executing a certain project/idea due to the fear that the final video would most certainly get demonetized anyway?
- Have you ever reached out to YouTube with the request to disclose the criteria that affect monetization of videos?
- Do you assume that the automated systems indeed assess the content based on the criteria listed in the YouTube monetization policies?
- In your opinion, what is a more efficient way of determining the suitability of content for monetization?
- Have you ever requested a human review in appeal of the negative decision to demonetize your content? If yes, has the human review ever resulted in a positive decision (monetization was granted)? If not, please specify in a few words the grounds for negative decision provided to you by a human expert.
- Did the grounds for a negative decision actually correspond to the rules found in YouTube monetization policies?
- In your opinion, did the grounds for a negative decision actually reflect the subject matter of your content (i.e. do you agree the content actually contained elements that had violated the said rules)?

- Do you consider the assessment results of the human reviewer(s) credible?
- Did you know the identity of the human reviewer assigned to review your content?
- Have you been provided with means to contact the said reviewer, other reviewers or YouTube representatives for a comment justifying their (negative) decision?
- Have you tried to contest the negative decision issued as a result of an appeal even after the human review had taken place? If yes, what were the consequences of your attempts?
- Do you consider the current mechanism of assessing the suitability of content for advertisers fair, transparent and/or adequate?
- Do you think that you as a creator would benefit from the creation of a mediation board for dispute resolution?
- Who would you rather see represented in such a mediation board (e.g., fellow YouTubers, YouTube experts, professional creators outside YouTube with expertise in filmmaking, legal professionals, etc.)

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