Reputational Ranking of platform workers: on the gender discriminatory implications of users' feedback

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One distinctive feature of on-demand platform work is the ease of outsourcing the service's quality assessment to clients. To set minimum quality standards of service, platforms aggregate users' feedback and form a reputational score for workers, which, often combined with other criteria, directly impacts their job opportunities and working conditions. The article questions whether this practice may constitute discrimination under the European Union equality law.

It first argues that the use of reputational ranking systems does not qualify as an exception to the prohibition of differential treatment based on a protected characteristic linked to the genuine and determining occupational requirement. Indeed, having a certain reputational score does not constitute a requirement objectively dictated by the nature of the activity or the context in which it is carried out.

Referring then to the possibility of the particular disadvantage of a reputational ranking being objectively justified, it is argued that, although assessing workers' performance may likely be considered a legitimate aim, neither the appropriateness nor the necessity of the measure for achieving that

aim should be assumed, and customer ratings, indeed, would probably not meet the proportionality requirement.

To conclude, the article highlights how the issue of discriminatory reputational ranking exemplifies a broader question concerning algorithmic accountability, namely whether algorithms can be held accountable for perpetuating existing social biases, especially one as pervasive as sexism, and it criticizes the use of that narrative to frame the issue.

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SUMMARY: 1. Platforms' externalization of workers' evaluation to users and the risk of discriminatory feedback. – 2. Rule-based and machine-learning algorithms within the context of reputational ranking systems. – 3. Reputational scoring and the genuine and determining occupational requirement exception. – 4. Indirect discrimination and the margin of objective justification – 5. Conclusions.

1. Platforms' externalization of workers' evaluation to users and the risk of discriminatory feedback

Customers have always been able to express opinions on services. However, these were typically sporadic, whether they were expressed spontaneously or requested by the company[1]. On the contrary, one distinctive feature of on-demand platform work is the ease of externalizing the service's quality assessment to clients, who are asked to evaluate each service through a score, a questionnaire, or a written review[2].

Reputational rating systems are mainly used in the platform work, whether on demand via app or online crowd work[3]. To set minimum quality standards of service, platforms aggregate users' feedback and form a reputational score for each worker, which may be combined with other criteria, such as productivity[4].

Customers' evaluations directly impact the platform worker's access to work and working conditions, as also recognized by case law[5]. A worker's position in the ranking

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[1] G. Pacella, *Il lavoro nella* gig economy *e le recensioni* online: *come si ripercuote sui e sulle dipendenti il gradimento dell'utenza?, LLI,* 2017, 3, 1, 13.

[2] See, in general, on the topic: G. Pacella, *Il lavoro nella* gig economy, cit., 3 ff.; A. Todolì-Signes, *The evaluation of workers by customers as a method of control and monitoring in firms: Digital reputation and the European Union's General Data Protection Regulation, International Labour Review,* 2021, 160, 1, 65 ff.; O. Dessì, *Il rating tra violazione del diritto alla riservatezza degli operatori ed effetti delle valutazioni positive della loro performance da parte degli utenti,* in P. Loi (ed), *Il lavoro attraverso piattaforme digitali tra rischi e opportunità*, Edizioni Scientifiche Italiane, 2021, 90 ff.; G. Zampini*, Il* rating *reputazionale nell'era digitale tra potere direttivo/organizzativo e disciplinare. Alcune riflessio*ni, in A. Bellavista, R. Santucci (eds.), *Tecnologie digitali, poteri datoriali e diritti dei lavoratori*, Giappichelli, 2022, 182 ff.

[3] However, they rapidly expand in traditional sectors, notably those characterized by customer-facing employees (such as call centers or restaurants). R. Ducato *et al.*, *Customer ratings as a vector for discrimination in employment relations? Pathways and pitfalls for legal remedies,* Proceedings of the Marco Biagi Conference 2018*,* 2.

[4] M. Kullman, *Platform Work, Algorithmic Decision-Making, and EU Gender Equality Law*, *IJCLLIR,* 2018, 34, 1, 4.

[5] In Italy, for instance, a recent ruling from the Tribunal of Palermo (17 November 2023) has examined a platform organizational model that measured rider efficiency on the basis of certain criteria, including customer ratings. However, the decision focused, in line with the plaintiffs' claims, on the

may determine access to future work slots, and an account could be automatically disconnected if the rating falls below a certain threshold. Customers' feedback may also influence the user-worker matching or the dynamic pricing of the pay. Platform workers depend on positive feedback to receive (a certain level of) pay and to continue to be registered in the digital platform[6]. Customer-sourced rating systems' capacity to affect workers' perspectives is especially concerning when these systems provide no means to challenge customer feedback or evaluate customers' behaviour[7].

Rating systems within the platform economy go beyond simply evaluating whether a worker fulfilled a service and met a basic standard of professionalism. Instead, they aim for a multifaceted assessment from the reviewer, embracing a nuanced judgment that acknowledges the possibility of non-compliance but doesn't reduce the evaluation to a binary determination between diligent and negligent performance[8]. In the digital market[9], where a company's reputation is no longer an intangible capital but a measurable asset, the its interest in accumulating reputational capital for competitive advantage becomes pressing. This leads to retaining workers who meet certain rating thresholds and rewarding those who enhance the company's reputation, thus transferring the risk of any negative service evaluation to the workers[10].

Moreover, through reputational systems, users rate not only the service *itself* but also workers' emotional performance. Indeed, these mechanisms, particularly in the on-demand economy where there is direct and "in-person" contact between the worker and the client, exacerbate the emotional labour required of the worker. Emotional labour implies that workers are *de facto* expected to mobilize a cognitive and behavioural dimension involving their identity, cultural background, and life experience and to put

other criteria taken into account by the algorithm to evaluate workers' performances, i.e. the number of deliveries made, the number of hours worked during peak periods, and missed bookings of working hours, which were found to be discriminatory. For a comment on the ruling, see V. Nuzzo, *La intrinseca natura discriminatoria dei modelli organizzativi basati sui punteggi di eccellenza per i più affidabili e produttivi, RIDL,* 2023, II, 4, 763 ff.; A. Ingrao, *Critica della ragione artificiale. La discriminazione algoritmica intersezionale e gli obblighi di parità di trattamento in ipotesi di impiego di sistemi decisionali automatizzati, RGL,* 2024, II, 2, 170 ff.; C. Pareo, *I modelli organizzativi fondati su meccanismi premiali indifferenziati alla presenza di fattori protetti sono discriminatori, ADL,* 2024, II, 3, 649 ff.

(6) M. Kullman, *Platform Work, Algorithmic Decision-Making,* cit., 8.

(7) European Institute for Gender Equality, *Artificial Intelligence, platform work and gender equality,* 2021, 27. See V. Nuzzo, *Customer Satisfaction e contratto di lavoro subordinato, DLRI,* 2020, 1, 27 ff., who argues that scores and reviews are given in the absence of pre-established evaluative standards and are influenced by clients' expectations, habits, tastes and prejudices, and should not, therefore, constitute a means of controlling performance nor should they have disciplinary relevance.

(8) A. Topo, *Automatic management, reputazione del lavoratore e tutela della riservatezza, LD,* 2018, 32, 3, 461 f.

(9) There are even digital platforms whose service is to form reputational ratings for each user in relation to, for instance, criminal, tax and civil profiles (including work and civic engagement, studies and training), as the one described by A. Donini, *Profilazione reputazionale e tutela del lavoratore: la parola al Garante della* Privacy*, LLI,* 2017, 3, 1, 37 ff.

(10) V. Nuzzo, *Customer Satisfaction,* cit., 45.

these into the users' expectations. For instance, workers providing home-repair service must quickly assess whether the clients would enjoy talking and being involved in the ongoing task process and eventually figure out the boundaries of the interaction, the tone that would be appreciated, and all other effective ways to put the client at ease[11].

Reputational ranking systems offer several advantages for all the parties involved. From the platform's point of view, enabling service users to evaluate workers saves costs and provides unfiltered judgments directly expressed by clients, which are undoubtedly very precise regarding their expectations. In addition, reputational rankings help customers making informed choices, as through consolidated rankings, they avoid the problem of informational overload, which could be caused by a large number of contradictory reviews[12]. Moreover, ratings have the potential to promote accountability among workers and create a digital reputation that certifies their professionalism[13].

However, ranking systems may also be a vehicle of arbitrariness for workers. Customer ratings may be compromised because the rigid construction of reputational models often leads to polarized evaluations, where the average ratings do not seem to have much weight[14]. Turning a qualitative opinion about an overall experience into a quantitative score can oversimplify the review. Customers are not often aware of the critical consequences of even a – for instance – 4 out of 5 "stars" received by an Uber driver[15]. Moreover, the outcomes of reputational rankings could be influenced by factors that are beyond the workers' control, such as, for instance, app malfunctions, service shortages, weather conditions, or traffic[16]. Ultimately, the risk of inaccurate assessments is *inherent* in a subjective evaluation model[17].

Inaccuracies can also stem from more pathological factors, such as customers giving a mistaken score, complaining fraudulently to get a refund, or expressing prejudices based on gender, race, or other grounds[18]. Indeed, users' feedback

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[11] G. Pisani, *Piattaforme digitali e autodeterminazione. Relazioni sociali, lavoro e diritti al tempo della "governamentalità algoritmica"*, Mucchi Editore, 2023, 63. For another example, see B. Rogers, *The social cost of Uber, University of Chicago Law Review Dialogue,* 2017, 82, 1, 97 f.

[12] R. Ducato *et al.*, *Customer ratings*, cit*.,* 8 f.

[13] Platforms should ensure the "portability" of the professional reputation acquired by the workers; denying this possibility risks substantially limiting their ability to switch platforms, as it increases the so-called exit costs (or switching costs). G. Smorto, *La tutela del contraente debole nella* platform economy, *DLRI*, 2018, 158, 436.

[14] G. Pacella, *Il lavoro nella* gig economy, cit., 3.

[15] R. Ducato *et al.*, *Customer ratings,* cit., 9.

[16] G. Pisani, *Piattaforme digitali e autodeterminazione,* cit., 64.

[17] A. Ingrao, *I sistemi di* feedback *basati su* rating *e* reviews *tra controllo della prestazione lavorativa e divieto di decisioni automatizzate,* in C. Alessi, M. Barbera, L. Guaglianone (eds), *Impresa, lavoro e non lavoro*, Cacucci, 2019, 203; V. Nuzzo, *Il controllo della prestazione di lavoro resa fuori dai confini dell'impresa, LLI,* 2023, 9, 1, 91.

[18] N. Leong, *The sharing economy has a race problem*, www.salon.com, 2014; B. Rogers, *The social cost of Uber*, cit., 97 ff.; E. Dagnino, *Dalla fisica all'algoritmo: una prospettiva di analisi giuslavoristica*, Adapt

mechanisms can mask customer-sourced prejudices, which can result in women[19] or racialized[20] workers' performances being systematically underrated. For instance, a female platform worker offering home repair services may receive lower ratings than her male counterparts simply because users assume women are less knowledgeable or capable in traditionally male-dominated fields. The reputational systems, or – more precisely – their impact on job opportunities, may perpetuate existing social biases. This happens because «in a competitive market that contains private racism and sexism (…) the existence of third-party pressures can create significant spheres of discrimination»[21].

After briefly delineating the distinction between rule-based and machine-learning algorithms in the reputational ranking context (par. 2), the article examines whether the use of a user feedback system that automatically influences access to work and working conditions could constitute discrimination under EU equality law. It first explores whether such systems might fall within an exception to the prohibition of discrimination if a platform claims that maintaining a specific score reflecting customer satisfaction constitutes a genuine and determining occupational requirement (par. 3). Then, the article considers whether employing a reputational ranking could amount to indirect discrimination based on, above all, gender and race, by being an apparently neutral practice that amount to a disadvantage for a specific protected group that is not justified. In particular, the article questions whether using an automated reputational system can be objectively justified because it pursues a legitimate aim and the means for achieving it are appropriate and necessary (par. 4). The article concludes by highlighting how the issue of discriminatory reputational ranking systems exemplifies the broader question of whether algorithms should be held accountable for perpetuating existing social biases, in particular ones as pervasive as sexism, and it criticizes that framing of the issue (par. 5).

It would, however, also be worth questioning whether the ranking systems used by digital platforms may fall within the prohibition of social scoring referred to in Art. 5, lett. c) of the EU Artificial Intelligence Act (Reg. 2024/1689)[22]. Indeed, the AI Act

University Press, 2019, 182 f.; L. Zappalà, *Informatizzazione dei processi decisionali e diritto del lavoro: algoritmi, poteri datoriali e responsabilità del prestatore nell'era dell'intelligenza artificiale*, *WP CSDLE Massimo D'Antona.IT*, 2021, 446, 23.

[19] R. Xenidis, L. Senden, *EU non-discrimination law in the era of artificial intelligence: Mapping the challenges of algorithmic discrimination,* in U. Bernitz *et al.* (eds), *General Principles of EU law and the EU Digital Order,* Kluwer Law International, 2020, 161.

[20] W. Zwysen, A. Piasna, *Digital labour platforms and migrant workers. Analysing migrants' working conditions and (over)representation in platform work in Europe*, ETUI Working Paper, 2024, 6, 8; B. Rogers, *The social cost of Uber,* cit., 95 ff.

[21] C.R. Sunstein, *Why markets don't stop discrimination,* in C.R. Sunstein (ed), *Free markets and social justice,* Oxford University Press, 1997, 153, quoted by R. Ducato *et al.*, *Customer ratings*, cit., 3.

[22] A. Ingrao, *Hic sunt leones! La piramide del rischio costruita dalla proposta di Regolamento sulla intelligenza artificiale (emendata)*, LPO, 2023, 11-12, 786. The author wrote before the final agreement on

prohibits the so-called "social scoring", which takes shape in practices of «evaluation or classification of the social score of natural persons or group of persons, over a certain period, based on their social behaviour or known, inferred or predicted personal or personality characteristics». The ban operates when such a social score involves «detrimental or unfavorable treatment (…) that is unjustified or disproportionate to their social behaviour or its gravity»[23].

This definition[24] seems to broadly align with the reputational ranking systems described so far. Moreover, in a draft version of the AI Act, social scoring was exclusively associated with practices carried out by public authorities or on their behalf. However, in June 2023, the reference to public authorities was removed, and now Recital 31 explicitly refers to «AI systems providing social scoring of natural persons by public or private actors».

2. Rule-based and machine-learning algorithms within the context of reputational ranking systems

Platforms heavily rely on algorithms to manage service demand and workers' supply. For instance, within the ride service, platforms usually process users' feedback by averaging passenger ratings after a ride. Customer ratings thus contribute to determining shift or task assignation, customer-worker matching, pay or account's suspension or deactivation[25].

Decision-making procedures governed by rule-based (RB) algorithms are simplified to reasoning that follows the pattern: "if this, then that" and are therefore based on logical causation set by the programmer. In most cases, decision-making processes are more complex than that, consisting of several logical (sub-)rules and including many more variables. Nevertheless, the instructions are fixed, and all possible variables and outcomes are programmed. Rule-based algorithms are static because their rules can only be altered through programming. Their operation can generally be understood and explained in advance, and its outcomes are highly predictable.

A machine learning (ML) algorithm is based on a statistical-probabilistic method; therefore, it doesn't provide answers based on a logical causal relationship but on probabilistic correlations it identifies. The datasets employed to fine-tune machine

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the text of the AI Act was reached in March 2024. However, as the ban on social scoring remained in the final text, her considerations are still valuable. More in general, on the AI Act's relevance from a labour law perspective see, among many, M. Peruzzi, *Intelligenza artificiale e lavoro: l'impatto dell'AI Act nella ricostruzione del sistema regolativo UE di tutela,* in M. Biasi (ed), *Diritto del lavoro e intelligenza artificiale,* Giuffré, 2024, 115 ff.

[23] Art. 5, lett. c), ii) of Regulation 2024/1689.

[24] See A. Alaimo, *Il Regolamento sull'Intelligenza Artificiale. Un treno al traguardo con alcuni vagoni rimasti fermi,* www.federalismi.it, 2024, 241, who highlights both the vagueness of the definition and the provisions' indirect, implicit reference to discrimination.

[25] M. Kullman, *Platform Work, Algorithmic Decision-Making,* cit., 3-7.

learning algorithmic models are divided into training and test data. The training data "familiarizes" or "expose" the model to the correct answers, allowing it to refine a statistical model that connects input to output data. Subsequently, this model undergoes validation on input data it has not encountered before (the test data) to assess if it predicts the correct output. The set of discovered correlations is called "model" or "predictive model". Machine learning algorithms are dynamic because their rules evolve depending on input data. The more input data a machine learning algorithm is "fed", the more correlations it can find. Patterns found by machine learning algorithms might appear random to the human mind because they are based on statistical inferences and not on causal links. A causal relation may be lacking at all, meaning that machine learning models do not necessarily rely on characteristics or attributes causally related to the predicted outcome; they mine the available data to uncover patterns. For this reason, patterns found by a machine learning algorithm are not always predictable, and their decision-making process can, at best, only be fully reconstructed *ex-post*[26].

As said, algorithms govern rating systems by aggregating customer feedback and other criteria. Only when they are rule-based is the decision-making process determined by a finite number of precise instructions, over which the platform retains control.

Consider the following example: a rule-based algorithm is programmed to automatically deactivate drivers' accounts if their average user feedback score, expressed in tenths, falls below seven. Additionally, it prioritizes assigning work shifts to drivers with an average rating above nine, and only assigns shifts to those with ratings between seven and nine if no higher-rated drivers are available.

Consider, instead, a system that automatically assigns rides to available drivers in real time, known as a "free login system". In this case, the algorithm uses various data, including user feedback, to predict and suggest optimal matches - those likely to be accepted by both drivers and clients. If this matching process is powered by a machine learning algorithm, the criteria and weights it uses to make decisions can evolve over time. These changes are driven by the algorithm's ability to infer and adapt to new correlations in the data as they emerge.

3. Reputational scoring and the genuine and determining occupational requirement exception

According to Directive 2006/54, there shall be no discrimination on the grounds of sex regarding conditions for access to employment, self-employment[27], or

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[26] See, among others, F. Zuideerven Borgesius, *Discrimination, Artificial Intelligence and algorithmic decision-making*, Council of Europe report, 2018, 11 ff. For a visual summary of algorithmic paradigms, together with their typical tasks and the issues that may cause a systematic impact on fairness, see C. Schubert, M.T. Hütt, *Economy-on-Demand and the Fairness of Algorithms*, ELLJ, 2019, 10, 1, 7.

[27] On the personal scope of EU equality law in this scenario see R. Ducato *et al.*, *Customer ratings*, cit*.*, 4.

occupation, including selection criteria and recruitment conditions, and employment and working conditions, including dismissals and pay([28]). This is reiterated in substantially identical terms in the Race Directive regarding the grounds of race and ethnic origin([29]) and in the Framework Directive regarding religion or belief, disability, age, and sexual orientation([30]).

However, the three directives all contain, among others, the exception to the prohibition of discrimination represented by the genuine and determining occupational requirement. More precisely, according to Directive 2006/54: «(…) a difference of treatment which is based on a characteristic related to sex shall not constitute discrimination where, because of the nature of the particular occupational activities concerned or of the context in which they are carried out such a characteristic constitutes a genuine and determining occupational requirement, provided that its objective is legitimate and the requirement is proportionate»([31]).

Different authors have questioned whether automated reputational systems of platforms' work could fall under this exception. The imagined scenario involves a platform claiming that maintaining a certain threshold of service quality, assessed through this tool, constitutes a genuine and determining occupational requirement. According to those authors, the answer can be found in the Court of Justice of the EU's case *Bougnaoui*([32]), through an analogy with a «seemingly disconnected subject»([33]), by drawing a parallel between practices adopted by an employer to satisfy customers' wishes and choices grounded on biased customer ratings([34]).

The *Bougnaoui* ruling stemmed from the dismissal of an employee who had refused to comply with her employer's order not to wear an Islamic headscarf in the presence of customers. The CJEU ruled that the willingness of an employer to take account of a customer's wish no longer to have the services of that employer provided by a worker wearing an Islamic headscarf cannot fall under the exception. The judgement clarified that "genuine and determining occupational requirement" has to be objectively dictated by the nature of the activities or the context in which they are carried out. Essentially, the exception cannot «cover subjective considerations, such as the willingness of the employer to take account of the particular wishes of the customer»([35]).

([28]) Art. 14 (1) (a) and (c) of Directive 2006/54/EC.

([29]) Art. 3 (1) (a) and (c) of Directive 2000/43/EC.

([30]) Art. 3 (1) (a) and (c) of Directive 2000/78/EC.

([31]) Art. 14 (2) of Directive 2006/54; see also art. 4 of Directive 2000/43 and art. 4 (1) of Directive 2000/78 are in substantial identical terms.

([32]) CJEU, 14 March 2017, C-188/15.

([33]) R. Ducato *et al.*, *Customer ratings*, cit., 3.

([34]) *Ivi*, 3 ff. For the same analogy, see also: R. Xenidis, L. Senden, *EU non-discrimination* law, cit., 161; G. Centamore, L. Ratti, *Oltre il dilemma qualificatorio: potenzialità e limiti del diritto antidiscriminatorio nella protezione del lavoratore* on-demand*,* in C. Alessi, M. Barbera, L. Guaglianone (eds), *Impresa, lavoro e non lavoro*, Cacucci, 2019, 678.

([35]) CJEU, C-188/15, par. 40.

As anticipated, a parallel has been drawn between this case, which was welcomed as a curb to the growing dominance of customers in business interactions(36) and rating systems, which *de facto* allow clients to decide if and how much workers get to work. Following the same reasoning of the Court in *Bougnaoui,* prejudiced preferences expressed by customers in ratings should not lawfully inform access to work and working conditions, such as workers' pay, in discriminatory ways(37).

The parallel drawn between the situation addressed by the Court of Justice in the *Bougnaoui* case and rating systems, first of all, revolves around a ruling focused on a specific factor (i.e., religion) and a particular issue (i.e., the Islamic veil in the workplace), both of which are very peculiar. On these issues - that the Court views as particularly sensitive, both politically and in terms of public opinion - it tends to avoid taking an anti-majoritarian stance, unlike its approach to others factors. For instance, when it comes to combating racial discrimination, the Court tends to adopt a firmer position, considering it a "non-negotiable" priority(38). The analogy must, therefore, also be understood in light of the absence of a shared interpretative paradigm(39) across the various factors (and the more specific issues within them).

Moreover, the analogy is not entirely straightforward, as there are many essential differences between the two compared situations. In the *Bougnaoui* case, a (single) customer's "subjective consideration" arose spontaneously. By contrast, in the platform context, it is the *generality* of customers who are *explicitly* asked by the app to provide an evaluation.

Furthermore, in *Bougnaoui,* the Court clarified that the exception does not cover "subjective considerations, such as the willingness of the employer to take account of the *particular* wishes of the customer" (emphasis added)(40). One can hardly compare a customer's particular and overtly discriminatory wish not to deal with a veiled worker(41) with the ranking based on customer service evaluations.

In addition, the reference to "the nature of the work activity or the context in which it is carried out" limits the derogation's scope to requirements *objectively* dictated by a particular activity or, at least, a certain activity in a specific context(42). In this perspective, not wearing the Islamic headscarf was not objectively dictated by the nature

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(36) G. Centamore, L. Ratti, *Oltre il dilemma qualificatorio,* cit., 678.

(37) R. Xenidis, L. Senden, *EU non-discrimination law,* cit., 161 f.

(38) M. Barbera, S. Borelli, *Principio di uguaglianza e divieti di discriminazione*, *WP CSDLE Massimo D'Antona.IT*, 2022, 451, 75 s.

(39) *Ivi,* 76.

(40) CJEU, C-188/15, par. 40.

(41) In the conclusions, Advocate General Sharpston even referred to the customer's attitude as indicative itself of prejudice based on one of the 'prohibited factors' (see par. 133).

(42) According to Recital 19 of Dir. 2006/54, «any exception to this principle should therefore be limited to those occupational activities which necessitate the employment of a person of a particular sex by reason of their nature or the context in which they are carried out, provided that the objective sought is legitimate and complies with the principle of proportionality».

or the context of the work activities, as it did not affect Ms Bougnaoui's ability to do her job as a design engineer[43]. This is much more nuanced when referring to the quality of on-demand services.

In any case, there are additional arguments supporting the inapplicability of the exception to reputational systems.

First, this defence is intended to operate only in very limited circumstances[44]. The directives refer to "particular" occupational activities (e.g., artistic professions, or public services such as the armed forces and the police). Moreover, the exclusion does not apply to whole classes of jobs, but each case must be examined individually, in its context. In light of this, it's debatable whether services provided *via* app could be considered "particular" occupational activities, comparable to those addressed in the CJEU's decisions on this exception[45]. Unlike in those cases, it seems difficult to identify distinctive characteristics that, by the nature of the activities or their context, can be considered necessary to carry out on-demand platform work.

The mere fact that these services (e.g., the taxi service) existed and still exist outside the on-demand platform work context, therefore independently from algorithmic reputational scoring, confirms that the activity itself does not necessarily require constantly and automatically assessing the quality of the service *through reputational rankings.*

Furthermore, if a specific reputational score were essential for the activity, the platform should have initially selected workers who met that criterion. Since this cannot happen, the platform would have to make a more tenuous argument, namely that by automatically assessing workers' performance through customer feedback, it retroactively recognizes the job requirements that workers should have met from the outset.

Moreover, the assessment deployed by the rating system doesn't necessarily lead to the exclusion of the worker from the platform, which confirms that what is assessed is not strictly *necessary* to carry out the activity.

A platform might also argue that reputational ranking systems are necessary in the *context* of on-demand platform work because it would otherwise be impossible to manage workers while maintaining control over minimum service standards. However,

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(43) E. Howard, *Headscarves and the CJEU: Protecting fundamental rights and pandering to prejudice, the CJEU does both*, *Maastricht Journal of European and Comparative Law*, 2022, 29, 2, 248.

(44) E. Ellis, P. Watson, *EU Anti-discrimination law*, Oxford University Press, 2012, 382 f.; D. Izzi, *Eguaglianza e differenze nei rapporti di lavoro. Il diritto antidiscriminatorio tra genere e fattori di rischio emergenti,* Jovene, 2005*,* 126 ff. The author specifically highlights that openly discriminatory choices made by an employer to cater to customer preferences cannot be considered legitimate, 130 f. and 394 f.

(45) See, for a comment to some cases concerning the exception, E. Ellis, P. Watson, *EU Anti-discrimination law*, cit., 381 ff.; S. Borelli, A. Guariso, L. Lazzeroni, *Le discriminazioni nel rapporto di lavoro,* in M. Barbera, A. Guariso (eds), *La tutela antidiscriminatoria. Fonti, strumenti, interpreti,* Giappichelli, 2020, 186 ff.

this would not be a requirement dictated by the context but rather an advantageous possibility arising from the employer's choice to rely on an app to organize the service.

4. Indirect discrimination and the margin of objective justification

Being the appearance of neutrality intrinsic in a scoring system, it is unlikely that judges qualify the biased outcome of a reputational ranking as direct discrimination[46]. Rather, it may be worth questioning whether adopting a reputational ranking mechanism that, despite being general and apparently neutral, puts people from a protected group at a particular disadvantage without an objective justification, amount to indirect discrimination[47]. In particular, it should be considered whether using an algorithmic reputational system could be objectively justified[48] because it pursues a legitimate aim with appropriate and necessary means.

The first question is whether the aim of evaluating workers to ensure the service's quality would be considered legitimate. The CJEU has been reluctant to accept employers' defences based on economic concerns[49]. Specifically regarding the employer's willingness to take into account customers' expectations, the Court has ruled out the possibility of giving weight to the *discriminatory* subjective preferences of clients, even if this might result in harm to the economic interests of the business[50]. Indeed, in *Feryn*, the Court addressed a case where an employer presented his decision not to hire foreign workers as an inevitable consequence of the resistance shown by his clients toward them[51]. As there were no interpretative doubts regarding the issue, the legitimacy of such an objective found no place in the ruling; however, the Advocate General deemed the prejudices of the clients irrelevant[52].

In contrast, the Court has left more margin to the employer's willingness to cater to customer *legitimate wishes*. In *WABE* and *Müller*, the Court stated that, in establishing if there is a "genuine need" for a company neutrality policy, customers' rights and legitimate wishes may be considered. In defining clients' legitimate expectations, however, the Court referred to «the right of parents to provide for the education and

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(46) R. Ducato *et al.*, *Customer ratings,* cit., 13.

(47) Art. 2 (1) (b) of Directive 2006/54; art. 2 (2) (b) of Directive 2000/43; art. 2 (2) (b) (i) of Directive 2000/78.

(48) This would not apply to direct discrimination, which only knows exceptions, i.e. causes of exclusion from the scope of application of the prohibition, as the one seen at paragraph 3.

(49) On the interpretation of the concept of "business necessity" in light of the principle of proportionality, which excludes the admissibility of employer defences based solely on reasons of mere convenience or on general objectives of profit maximization for the company, see, among others, D. Izzi, *Eguaglianza e differenze*, cit., 157 ff. and, in particular, 170 ff.

(50) M. Barbera, S. Borelli, *Principio di uguaglianza*, cit., 75.

(51) CJEU, 10 July 2008, C-54/07, *Feryn,* para. 16.

(52) Opinion of Advocate General, 12 march 2008, C-54/07, para. 18. For a comment to the ruling see D. Izzi, *Il divieto di discriminazioni razziali preso sul serio, Rivista Giuridica del Lavoro,* 2008, II, 4, 765 ff. and, specifically on the employer's willingness to cater to customer preferences, see 773 ff.

instruction of their children according to their religious, philosophical and pedagogical beliefs», and it explicitly excluded that the desire to satisfy customers' and entrepreneurs' mere *wishes*, as those in *Bougnaoui* and *Feryn*, is worthy of protection[53].

The algorithmic assessment of the quality of the service cannot, on the one hand, be equated to the intention to accommodate openly racist costumer preferences (as in *Feryn*). On the other hand, it appears far less contentious than the employer's willingness to enforce a neutrality policy regarding religious expression (as in *WABE and Müller*). Therefore, a reputational ranking will likely pass the "first hurdle", because it serves the legitimate business aim of assessing workers' performance[54].

In addition, the measure to pursue the legitimate aim should be appropriate and necessary[55]. As the appropriatness of the measure presupposes that the means are suitable for contributing to the realisation of the intended objective, a mere correlation between the means and the objective is not sufficient for justification[56]. As most of the time customers can access the past "ranking score" of the platform worker[57], it should be questioned whether their new feedback *effectively* measures the quality of the service and, in particular, whether the predictive accuracy of customers' evaluations could be considered a valid indicator of the appropriateness of the measure. Indeed, even if the outcome of the reputational ranking is a very accurate predictor of future *clients' appreciation*, it may be that «the predictive accuracy of the model is only high because the world is predictably biased»[58].

Algorithmic predictive models can be affected by the so-called feedback loop phenomenon[59]: a clear example is a crime-prediction model trained on historical crime

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(53) CJEU, 15 July 2021, joined cases C-804/18 and C-341/19, *Wabe* and *Müller*, para 65-66.

(54) P. Hacker, *Teaching Fairness to Artificial Intelligence: Existing and Novel Strategies against Algorithmic Discrimination under EU Law*, *Common Market Law Review*, 2018, 55, 1161; R. Xenidis, L. Senden, *EU non-discrimination law,* cit., 172.

(55) The requirement of proportionality, interpreted in terms of appropriateness and necessity, must be rigorously assessed. In this regard, different authors have warned about the risk of subsuming the means-aims analysis into the legitimacy test. L. Vickers, *Achbita and Bougnaoui: One Step Forward and Two Steps Back for Religious Diversity in the Workplace*, *European Labour Law Journal*, 2017, 8, 3, 251, explains that the Court in *Achbita* (CJEU, 14 March 2017, C-157/15), after deeming the employer's aim to display neutrality in relations with customers legitimate, failed to critically assess whether the internal company rule banning visible political, philosophical, or religious symbols was strictly necessary to achieve that aim. Instead, the Court simply assumed that uniformly applying the rule to all customer-facing employees was proportional.

(56) F. Malorny, T. Rieger, *AI-Driven Recruiting: A Consideration on Data Protection- and Anti-Discrimination Law,* in Menegatti E. (ed), *Law, Technology and Labour,* Bologna University Press, 2023, 151 f. According to A. Kelly-Lyth, *Algorithmic Discrimination at Work, ELLJ,* 2023, 14, 2, 155*,* «assuming that algorithms with high 'accuracy' scores are almost always 'effective' or 'appropriate' is problematic».

(57) Which is exactly what the trust in using an on-demand service is based on: there are third-party reviews that report previous experiences with that buyer or provider of a service. It is as if the rating systems have codified the "word of mouth", as noted by R. Ducato *et al.*, *Customer ratings,* cit., 8.

(58) J. Adams-Prassl *et al.*, *Directly Discriminatory Algorithms*, *Modern Law Review*, 2023, 86, 1, 153.

(59) See, among others, P. Hacker, *Teaching Fairness,* cit.*,* 1150.

data that is biased due to discriminatory policing practices. Although the neighborhoods subjected to more scrutiny are not necessarily those with the highest crime rates, the opposite tends to happen: the most scrutinized neighborhoods become those with the highest numbers of registered crimes. Indeed, in areas where crime rates are *predicted* to be high, there will be more police scrutiny, consequently increasing the recorded crimes, thus reinforcing and reifying the biased prediction, making it appear true[60].

The same could apply in the referred context. «The rating system aggregates individual biased scores, resulting in a composite score reflecting the net effect of many biased ratings. Negative ratings can become self-perpetuating. If a passenger sees that an Uber driver has a low rating, the passenger may be primed to view the driver negatively. Such priming may lead to ambiguous conduct being interpreted more negatively and, ultimately, to more negative ratings. The result is a vicious cycle of self-reinforcing bias»[61].

Therefore, a socio-cultural context where customers' reviews are particularly biased against female (or racialized, etc.) workers may be one of those cases where predictive accuracy and algorithmic fairness are inversely proportional[62]. The more the algorithm processing feedback predicts the customers' *prejudiced* appreciation of the quality of a service (meaning the higher the predictive accuracy of the model is), the stronger the adverse impact on certain groups would be. Therefore, the suitability of reputational ranking systems as a measure for assessing the quality of workers' services should not be assumed.

Moving to the platform's ability *to demonstrate* the requirement of the appropriateness of the measure, a distinction between rule-based and machine-learning algorithms should be drawn. A platform that wants to objectively justify its reputational ranking system's particular disadvantage on a protected group should demonstrate that the criteria *effectively* measure the worker's overall performance. To prove this, it should demonstrate that customers' feedback aligns, at least to a certain extent, with other measures of workers' performance (e.g., timing of deliveries, number of lost deliveries, etc.). The context of platform work inherently allows for collecting and processing more objective data concerning the quality of the service. Just as there are indicators suitable for assessing worker productivity, others can provide insights on whether the performance, from the customer appreciation perspective, remains above a certain threshold[63].

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[60] P.T. Kim, *AI and Inequality*, Washington University in St. Louis Legal Studies Research Paper No. 21-09-03, 2021, 6.

[61] N. Leong, *The sharing economy,* cit.

[62] P. Hacker, *Teaching Fairness,* cit., 1150.

[63] See G. Pisani, *Piattaforme digitali,* cit., 64, according to whom, given the dehumanization experienced by platform workers, often perceived more as a service than as persons, a critical analysis of customers' judgments and the reasonableness of their expectations becomes urgent, regardless of the risk of potential discriminatory feedback. See also European Institute for Gender Equality, *Artificial*

This proof would be much easier when rule-based algorithms are employed since the instructions are finite, predefined and decided by the platform. Differently, a ML algorithm dynamically adjusts the weight of these factors based on patterns in the data, making it more complex to demonstrate the appropriateness of the criteria. The platform can still prove that other data about the performance, such as orders' accuracy rates and delivery times, correlate to some extent with customer ratings. Despite this, the platform – being the functioning of ML dynamic and not static – would bear the risk of losing control over the weight of criteria and, more generally, over the correlations automatically identified (see *supra,* par. 2).

Assuming that the suitability of the criterion is demonstrated, the last step of the "proportionality test" would be to verify whether the measure is not only appropriate, but also necessary, meaning that the harm resulting from the infringement of the right is minimal and fairly balanced with the pursued aim.

Whichever equality paradigm the CJEU adopts in conducting the proportionality test[64], a reputational ranking system putting people from a protected group at a particular disadvantage risks failing the test, at least when the disadvantage is based on gender or race.

The first paradigm, also called the "participative equality model"[65], prioritizes the socialization-centered rationale, namely the socialization in condition of diversity over competing interests. If Court relies on it, the analytical framework deployed prioritizes «the objectives of EU-antidiscrimination law in terms of participation in the labour market», which are intended to avoid socio-economic exclusion and cultural marginalization that could lead to social unrest[66]. If this first equality paradigm orientated the balancing exercises, and therefore the inclusion, diversity, and participation objectives lead the reasoning, it would be likely that reputational ranking systems that disadvantage some protected groups would fail the proportionality test.

However, the same result would probably occur if the Court relied on the balancing paradigm, according to which the former is «framed in terms of classic balancing between competing fundamental rights and focuses on finding a fair

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Intelligence, platform work and gender equality, www.eige.europa.eu, 2021, 27, which even questions the use of quantitative performance metrics for promotion or compensation decisions, as they can disadvantage certain groups. Universal performance benchmarks prioritize more easily quantifiable aspects of work, while other contributions - such as preparatory tasks and emotional labour, often carried out by women - remain largely unacknowledged. For an example on how, despite universalized performance rates, women, and mothers in particular, can be disadvantaged in platform crowd-work, see A. Adams-Prassl, *The Gender Wage Gap on an Online Labour Market: The Cost of Interruptions*, CEPR Discussion Paper No. DP14294, 2020, 1 ff.

[64] R. Xenidis, *The polysemy of anti-discrimination law: the interpretation architecture of the framework employment directive at the Court of Justice, Common Market Law Review* 2021, 58, 6, 1687 ff.

[65] R. Xenidis, *The polysemy of anti-discrimination law,* cit., 1689 f.

[66] *Ibidem.*

compromise between divergent interests in society»(⁶⁷). If the Court's aim is that of finding a compromise that can maximize the different fundamental rights involved, the right not to be discriminated against (art. 21 of the EU Charter of Fundamental Rights) would have to be balanced with the employer's freedom to conduct a business (art. 16 of EU CFR). But even when the matter is reduced to a trade-off between non-discrimination and business efficiency(⁶⁸), the first would prevail, at least when discrimination is based on gender and race or ethnic origin, where the CJEU has always applied a stricter proportionality test(⁶⁹). Indeed, «however rational it may be for a commercial entrepreneur to bow to the discriminatory preferences of his customers, it is an argument that cannot serve as a ground of justification for discrimination» because an essential function of discrimination law is precisely to free employers from this type of pressure in the market(⁷⁰). Algorithmic reputational rankings, by embedding those customers' pressures, should therefore fail the necessity test even when the latter is framed as a balancing of equally relevant fundamental rights(⁷¹).

5. Conclusions

The issue of discriminatory reputational ranking exemplifies a broader question within the debate of algorithmic accountability, often framed as such: whether, and to what extent, algorithms can be held accountable for perpetuating existing societal biases, particularly one as pervasive as sexism.

The approach of Science and Technology Studies (STS)(⁷²) could contribute lucidly to this debate, helping to question the narrative chosen to frame the issue, by avoiding conservative approaches to algorithmic-driven inequalities that optimize the *status quo* by promoting changes that preserve the existing disparities(⁷³).

(⁶⁷) *Ivi*, 1691.

(⁶⁸) R. Xenidis, L. Senden, *EU non-discrimination law* cit., 173.

(⁶⁹) M. Barbera, S. Borelli, *Principio di uguaglianza,* cit., 75 s. On the strict application of the proportionality test in relation, for instance, to race and ethnic origin see, among others, CJEU, 16 July 2015, C-83/14, *Chez*.

(⁷⁰) E. Cloots, *Safe harbour or open sea for corporate headscarf bans? Achbita and Bougnaoui, Common Market Law Review*, 2018, 55, 613 f.

(⁷¹) In a national case concerning the algorithmic organizational model of a food-delivery platform (Tribunal of Bologna, 31 December 2020), the judge assessed the balance between business necessities and workers' rights, finding that the latter were disproportionately sacrificed in favor of the platform's economic interest. M. Barbera, *Discriminazioni algoritmiche e forme di discriminazione, LLI,* 2021, 7, 1, 11 f.; M.V. Ballestrero, *Ancora sui* rider. *La cecità discriminatoria della piattaforma, Labor,* 2021, 1, 113 f.

(⁷²) STS is a relatively new and interdisciplinary academic field, which focuses on the relationship between scientific knowledge, technological systems, and society. See, among many, S. Jasanoff *et al.* (eds)*, Handbook of Science and Technology Studies,* Sage, 2002.

(⁷³) M. Zajko, *Conservative AI and social inequality: Conceptualizing alternatives to bias through social theory, AI & Society*, 2021, 36, 3, 1047 ff.

Algorithmic decision-making does not merely reproduce or reinforce inequalities because of its scale and speed, but it also *mediates*(⁷⁴) them through their naturalization, thus objectifying discrimination. For instance, the so-called "AMS algorithm", applied to optimize the functioning of the Austrian labour market, reproduced classism precisely by concealing it: that is, specifically, by framing unemployment as an individualized problem and excluding any macro-level perspective(⁷⁵).

Inequalities are consistently reproduced also through processes that tend to naturalize their mode of production, with the effect of legitimizing them. Reputational ranking systems mediating customers' sexist or racist prejudices can be seen as one of the new expressions of this ever-going phenomenon.

Therefore, these systems, and discriminatory algorithmic systems more broadly, could not be reduced to the formula "bias in, bias out". Rather than passively reproducing existing inequalities, they should be understood as socio-technical products that contribute to the naturalization of inequality by invisibilizing and legitimizing it(⁷⁶). Customer rating systems should be thought of as part of the «cognitive, social, symbolic and even material resources with which the concept of gender is stabilized»(⁷⁷).

STS could, therefore, be one lens through which critically assessing the role of algorithmic *mediation* of customers' sexist and racist prejudices, starting from questioning the narrative chosen to frame the issue, which is to be held responsible for the conservative nature of the imagined solutions.

(⁷⁴) A.L. Hoffmann, *Where Fairness Fails: Data, Algorithms, and the Limits of Antidiscrimination Discourse, Information Communication and Society*, 2019, 22, 910; R. Xenidis, *Beyond bias: algorithmic machines, discrimination law and the analogy trap, Transnational Legal Theory*, 2023, 14, 4, 399.

(⁷⁵) The Public Employment Service Austria (AMS) utilized an algorithm to profile job seekers, with the goal of enhancing the efficiency of counseling processes and the effectiveness of active labour market programs. This algorithm employed a statistical model based on job seekers' likelihood of securing employment. See: D. Allhutter *et al.*, *Algorithmic Profiling of Job Seekers in Austria: How Austerity Politics Are Made Effective, Frontiers in Big Data*, 2020, 3, 14-15.

(⁷⁶) S. Jasanoff, *Ordering knowledge, ordering society*, in S. Jasanoff, *States of Knowledge. The Co-production of Science and Social Order*, Routledge, 2004, 19 ff.

(⁷⁷) *Ivi*, 35.

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