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## WOMEN'S LABOUR IN TV SERIES PRODUCTION: A COMPARATIVE ANALYSIS OF ITALIAN GENERALIST TV AND PAY PLATFORMS (2016-2019)

### *Abstract*

Influential European research on female representation and employment in the news media and audiovisual industry shows how the sector is dominated by strong gender inequality. Women's labour is under-represented, underpaid and characterised by high levels of precariousness. European audiovisual regulatory authorities are promoting an increase in gender representation both on- and off-screen through the analysis of existing industry-led practices and the development of non-legally binding recommendations. However, these policies often prove to be ineffective. Until now, most research has focused on analysing women's labour in film production. However, in September 2021 the European Audiovisual Observatory delivered a cross-country assessment of the gender imbalance in six audiovisual professional categories in European TV fiction. Considering the increasing interest in the audiovisual seriality sector, the aim of this paper is to conduct an exploratory analysis of the employment situation of women in the production of Italian TV series using IMDb as a data source. We focus on and discuss the intersections between women and labour through the production of Italian free-to-air and pay platform TV series in 2016-2019. By retrieving IMDb data for more than 8,000 credits, we evaluate and discuss gender inequalities, segregation and mobility patterns in the Italian audiovisual workforce and raise methodological challenges in relation to the use of online sources in gender-based studies of Europe's screen industries.

### *Keywords*

Women; labour; TV series; generalist TV; pay platforms.

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## 1. INTRODUCTION

Since the Fourth World Conference on Women (Beijing, 1995), it has become clear that the topic of women and media has played a crucial and cross-cutting role in the achievement of gender equality worldwide. During the Conference there was a call on governments, media industries, and the research community to take action to foster more gender-balanced media content and structures. The responsibility of the media is considerable when it comes to representing diversity<sup>1</sup> or, conversely, stereotypes of gendered

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<sup>1</sup> F.J. Cabrera Blázquez, M. Cappello, J. Talavera Milla, S. Valais, *Diversity and Inclusion in the European Audiovisual Sector*, IRIS Plus, European Audiovisual Observatory, Strasbourg, April 2021.

roles<sup>2</sup>. While there are several sociocultural factors that contribute to the formation and construction of biases and collective imaginaries, media exposure can have a significant influence<sup>3</sup>. Indeed, empirical evidence shows how media representations and content can, and do, influence people's understanding and behaviours under certain conditions<sup>4</sup>. In this context, it is key to understand the different levels through which media may contribute to diversity. Considering the primary components of diversity (i.e., source, content, and exposure diversity<sup>5</sup>), several studies have been concerned with one of the subcomponents of *source diversity*: the diversity of the workforce within individual media outlets<sup>6</sup>. Some of this research has aimed to understand who is responsible for on-screen representation through an analysis of the diversity within the teams behind the camera. Indeed, there is evidence of a positive relationship between the number of female or male characters portrayed on-screen and the number of females or males working behind the scenes<sup>7</sup>. In scripted programmes (e.g., TV series), the relationship between the presence of women in the production team and the portrayal of women has been shown to be clear, while in other genres (e.g., reality shows) it has not<sup>8</sup>. There have also been comparative investigations that consider how different media outlets approach gender equality, such as analyses focusing on the assessment of women's representation on-screen and their presence behind the scenes on broadcast and streaming platforms on US TV shows. These analyses reveal that programmes on streaming services had substantially higher percentages of women working as creators, directors, and editors than broadcast programmes. In addition, programmes with women creators employed higher percentages of women as directors, writers, and editors<sup>9</sup>.

<sup>2</sup> T. Williams, "Gender, Media and Democracy", *The Round Table: The Commonwealth Journal of International Affairs*, 89, 357 (2000): 577-583. Accessed August 7, 2022. DOI 10.1080/003585300225205.

<sup>3</sup> E. Scharrer, "Hypermasculinity, Aggression and Television Violence: An Experiment", *Media Psychology*, 7 (2015): 353-376. Accessed August 7, 2022. DOI 10.1207/S1532785XMEP0704\_3; E. Scharrer, "Television and Gender Roles: Cultivating Conceptions of Self and Other", in *Living with Television Now: Advances in Cultivation Theory and Research*, edited by M. Morgan, J. Shanahan, N. Signorielli, New York: Peter Lang, 2012: 81-100; R.M. Perloff, "Social Media Effects on Young Women's Body Image Concerns: Theoretical Perspectives and an Agenda for Research", *Sex Roles*, 71, 11 (2014): 363-377. Accessed August 7, 2022. DOI 10.1007/s11199-014-0384-6.

<sup>4</sup> K.E. Dill, K.P. Thill, "Video Game Characters and the Socialization of Gender Roles: Young People's Perceptions Mirror Sexist Media Depictions", *Sex Roles*, 57, 11 (2007): 851-864. Accessed August 7, 2022. DOI 10.1007/s11199-007-9278-1.

<sup>5</sup> These terms refer respectively to the study of: (I) who is responsible for on-screen representation and therefore considers off-screen diversity within the production context (source diversity); (II) on-screen representation diversity (content diversity); and (III) off-screen diversity (considering the audience – exposure diversity). P.M. Napoli, "Deconstructing the Diversity Principle", *Journal of Communication*, 49, 4 (1999): 7-34; T. Krijnen, S. Van Bauwel, "Gender and Media: Representing, Producing, Consuming", New York: Routledge, 2015.

<sup>6</sup> B. Conor, R. Gill, S. Taylor, "Gender and Creative Labour", *Sociological Review*, 63, S1 (2015): 1-22. Accessed August 7, 2022. DOI: 10.1111/1467-954X.12237.

<sup>7</sup> J. Glascock, "Gender Roles on Prime-Time Network Television: Demographics and Behaviors", *Journal of Broadcasting and Electronic Media*, 45, 4 (2001): 656-669. Accessed August 7, 2022. DOI 10.1207/s15506878jobem4504\_7.

<sup>8</sup> M.M. Lauzen, D.M. Dozier, E. Cleveland, "Genre Matters: An Examination of Women Working Behind the Scenes and On-screen Portrayals in Reality and Scripted Prime-Time Programming", *Sex Roles*, 55, 7 (2006): 445-455. Accessed August 7, 2022. DOI 10.1007/s11199-006-9100-5; M.M. Lauzen, D.M. Deiss, "Breaking the Fourth Wall and Sex Role Stereotypes: An Examination of the 2006-7 Prime-Time Season", *Sex Roles*, 60, 5 (2009): 379-386. Accessed August 7, 2022. DOI 10.1007/s11199-008-9553-9; M.M. Lauzen, "Boxed in: Women On Screen and Behind the Scenes on Broadcast and Streaming Television in 2020-21", The Center for the Study of Women in Television and Film, San Diego State University, 2019. Accessed August 7, 2022. [https://womenintvfilm.sdsu.edu/wp-content/uploads/2021/09/2020-21\\_Boxed\\_In\\_Report.pdf](https://womenintvfilm.sdsu.edu/wp-content/uploads/2021/09/2020-21_Boxed_In_Report.pdf).

<sup>9</sup> Lauzen, "Boxed in: Women On Screen and Behind the Scenes on Broadcast and Streaming Television in 2020-21".

The film and television industry has been found to exhibit common features which together constitute a sectoral regime of inequality<sup>10</sup>. For example, Skadi Loist and Elizabeth Prommer<sup>11</sup> empirically highlight how gender imbalance in the German film industry contributes to the unsustainability and precarity of women creative professionals' careers (directors, producers, cinematographers, and scriptwriters). Organisational processes within TV production are predominantly characterised by precariousness, informality, requirements for flexibility<sup>12</sup>, and 'bulimic' working patterns<sup>13</sup> that intensify inequalities, restrict employment prospects, and render equal opportunity policies ineffective<sup>14</sup>, turning them into "empty shells"<sup>15</sup>. These labour conditions have proven to disadvantage women's careers in comparison with men's<sup>16</sup> (e.g., in terms of pay, contractual status or seniority) and often this disadvantage intersects with categories of ethnicity, age, sexuality and class, among other characteristics<sup>17</sup>. The screen industry is therefore characterised by the under-representation, under-promotion, and under-rewarding of women<sup>18</sup>. The under-representation of women off-screen in most, if not all, fields of media production underlines how the sector is still marked by vertical and horizontal segregation with regards to gender. Vertical segregation refers to the idea that women are found in managerial or editor-in-chief positions less often than men. For example, research conducted on women's working experiences in British TV production points out that the "bifurcation of roles [...] took place after Assistant Producer level, with women oriented toward development roles associated with legal and financial responsibilities, which can be carried out relatively flexibly (and often on a freelance basis), and men taking the more prestigious and highly paid creative and director routes"<sup>19</sup>. Instead, horizontal segregation refers to specialisations within a certain field. In this way, "segregation tends to possess a messy combination of both horizontal and

<sup>10</sup> J. Acker, "From Glass Ceiling to Inequality Regimes", *Sociologie du travail*, 51, 2 (2009): 199-217. Accessed August 7, 2022. DOI: 10.1016/j.sotra.2009.03.004; A. Coles, K. MacNeill, "Policy Ecologies, Gender, Work, and Regulation Distance in Film and TV Production", in *Women, Labor Segmentation and Regulation. Varieties of Gender Gaps*, edited by D. Peetz and G. Murray, New York: Palgrave Macmillan, 2017: 211-232.

<sup>11</sup> S. Loist, E. Prommer, "Gendered Production Culture in the German Film Industry", *Media Industries*, 6, 1 (2019): 95-115. DOI: 10.25969/mediarep/14849.

<sup>12</sup> A. Coles, K. MacNeill, "Policy Ecologies, Gender, Work, and Regulation Distance in Film and TV Production", in *Women, Labor Segmentation and Regulation. Varieties of Gender Gaps*, edited by D. Peetz and G. Murray, New York: Palgrave Macmillan, 2017: 211-232.

<sup>13</sup> A.C. Pratt, "Hot Jobs in Cool Places. The Material Cultures of New Media Product Spaces: The Case of South of the Market, San Francisco", *Information, Communication and Society*, 5, 1 (2002): 27-50. Accessed August 7, 2022. DOI: 10.1080/13691180110117640.

<sup>14</sup> J. Holgate, S. McKay, "Equal Opportunities Policies: How Effective Are They in Increasing Diversity in the Audio-Visual Industries' Freelance Labour Market?", *Media Culture & Society*, 31, 1 (2009): 151-163. Accessed August 7, 2022. DOI 10.1177/0163443708098250.

<sup>15</sup> K. Hoque, M. Noon, "Equal Opportunities Policy and Practice in Britain: Evaluating the 'Empty Shell' Hypothesis", *Work, Employment and Society*, 18, 3 (2004): 481-506. Accessed August 7, 2022. DOI 10.1177/0950017004045547.

<sup>16</sup> D. Hesmondhalgh, S. Baker, *Creative Labour: Media Work in Three Cultural Industries*, Abingdon: Routledge, 2011; T. Dent, "Devalued Women, Valued Men: Motherhood, Class and Neoliberal Feminism in the Creative Media Industries", *Media, Culture & Society*, 42, 4 (2020): 537-553. Accessed August 7, 2022. DOI: 10.1177/0163443719876537; N. Percival, "Gendered Reasons for Leaving a Career in the UK TV Industry", *Media Culture & Society*, 42, 3 (2020): 414-430. Accessed August 7, 2022. DOI: 10.1177/0163443719890533.

<sup>17</sup> P.H. Collins, S. Bilge, *Intersectionality*, Hoboken: John Wiley & Sons, 2016.

<sup>18</sup> ScreenSkills, *Annual ScreenSkills Assessment*, London: ScreenSkills, 2019. Accessed August 7, 2022. <https://www.screenskills.com/media/2854/2019-08-13-skills-foresighting-report.pdf>.

<sup>19</sup> S. Milner, A. Gregory, "Time for a Change: Women, Work, and Gender Equality in TV Production", *Media, Culture & Society*, 44, 2 (2022): 286-302. Accessed August 7, 2022. DOI: 10.1177/016344372111045525.

vertical dimensions”<sup>20</sup>. Even if, in the European context, gender-aware strategies and media-focused policies are abundant, policies that articulate a strong commitment to media gender equality have proven to be scarce and ineffective<sup>21</sup>. In applying network science to the question of gender inequality within the Australian, German and Swedish film industries, Deb Verhoven and colleagues showed that the most likely way to generate behavioural changes that improve network openness and address gender inequality is the expansion of collaborative sector networks between men and women<sup>22</sup>. However, as highlighted by Amanda Coles and Kate MacNeill, “the issue of gender inequality in the film and television production industry is [...] both an employment equity issue and one of sociocultural significance”<sup>23</sup>.

Several collaborative projects between researchers, civil society, industry professionals and production companies exist to implement monitoring strategies and to build databases that may observe, promote, and enhance women’s labour in the screen industries (e.g., European Audiovisual Observatory; Eurimages; European Women’s Audiovisual network; Women in Film, Television & Media). We decided to focus on the Italian screen context because, among general trends that follow social transformations, the Italian television sector has received an innovative boost with the arrival of Netflix and its (seemingly) inclusive policies. In this paper, we employ an exploratory analysis that uses IMDb as a data source in relation to women’s labour in the production of Italian TV series<sup>24</sup>. We are interested in productions that were primarily aired in Italy through generalist TV and streaming platforms and pay TV<sup>25</sup> in the period 2016-2019<sup>26</sup>. The aim of this paper is twofold. First, we aim to assess whether there are significant differences in the female workforces across the production of TV series for generalist TV and pay platforms. In particular, we pay attention to understanding the distribution of gender inequalities, and segregation and mobility patterns (i.e., do female professionals hold the same roles? What career changes are taking place? Are these changes in above-the-line or below-the-line roles?). The focus is not on aggregate data, but we consider two levels of analysis: (I) differences within each professional role or department; and (II) differences at the level of individual professionals. Indeed, some studies suggest that “we are likely to understand the complexities of segregation by sex better, the more we drill down to specific job levels, rather than looking at occupations or occupational groupings (such as creative or craft workers, or ‘above-the-line’ and ‘below-the-line’ positions) as a whole”<sup>27</sup>. It

<sup>20</sup> J. Browne, *Sex Segregation and Inequality in the Modern Labour Market*, Bristol: Policy Press, 2006.

<sup>21</sup> K. Sarikakis, E.T. Nguyen, “The Trouble with Gender: Media Policy and Gender Mainstreaming in the European Union”, *European Integration*, 31, 2 (2009): 201-216. Accessed August 7, 2022. DOI: 10.1080/07036330802642771; V.M. Byerly, C. Padovani, “Research and Policy Review”, in *Gender Equality and the Media: A Challenge for Europe*, edited by K. Ross and C. Padovani, New York-London: Routledge, 2017: 7-29.

<sup>22</sup> D. Verhoeven, K. Musial, S. Palmer, S. Taylor, S. Abidi, V. Zemaityte, L. Simpson, “Controlling for Openness in the Male-dominated Collaborative Networks of the Global Film Industry”, *PloS One*, 15, 6 (2020): e0234460. DOI: 10.1371/journal.pone.0234460.

<sup>23</sup> Coles, MacNeill, “Policy Ecologies, Gender, Work, and Regulation Distance in Film and TV Production”: 212.

<sup>24</sup> Italian TV series are defined as those audiovisual products that have both ‘Country’ listed as ‘Italy’ and ‘Language’ listed as ‘Italian’ on IMDb. See the Methods and Data section for details.

<sup>25</sup> From here on we use the term pay platforms to indicate both streaming platforms and pay TV.

<sup>26</sup> Considering the exploratory nature of the analysis of this paper we decided to consider a brief window that is central to the landscape of Italian seriality since it considers a post-Netflix and pre-Covid time span.

<sup>27</sup> D. Hesmondhalgh, S. Baker, “Sex, Gender and Work Segregation in the Cultural Industries”, *The Sociological Review*, 63 (2015): 23-36. Accessed August 7, 2022. DOI: 10.1111/1467-954X.12238.

is not the intention of this study to propose yet another statistical analysis showing an established situation, but rather to grasp possible differences in each profession from a comparative perspective, in order to highlight trends and labour mobility patterns that may also help guide future research. Second, we critically discuss whether it is possible to reliably monitor gender inequality and segregation in the serial audiovisual production industry using IMDb as a data source. Although, as we will discuss in the last section, IMDb's user-generated data present some limits, it is being successfully used by some scholars for research<sup>28</sup> into gender issues, such as the CrEative NeTwoRks Information Cruncher (CENTRIC)<sup>29</sup>, which focuses on films, but it has also been used in studies related to user-generated content and user-generated film reviews<sup>30</sup>. Testing IMDb's potential, opportunities, and limitations as a data source for the study of audiovisual serial production might allow for a large-scale assessment of gender balance between countries and may help to evaluate the policies' impacts and their effectiveness.

## 2. METHODS AND DATA

As the corpus under investigation, we considered Italian audiovisual serial productions on generalist TV channels (Rai 1, Rai 2, Rai 3, Canale 5) and pay platforms (Amazon Prime Video, Netflix, Sky) from 2016 to 2019. We decided to focus on the period after Netflix's arrival in Italy and before the outbreak of Covid-19 because the impact of the global pandemic greatly disrupted the labour landscape worldwide, exacerbating employment insecurity and posing a significant threat to workforce diversity<sup>31</sup>. Data was obtained from IMDb<sup>32</sup> in August 2022 and processed with Python scripts using the IMDbPY package<sup>33</sup>. First, all data items corresponding to TV series and mini-series which had 'Country' listed as 'Italy' and 'Language' listed as 'Italian' were extracted. Then, all items identified as 'animation', 'game-show', 'news', 'sport', 'talk-show',

<sup>28</sup> SVP Group, "Automatic Generation of Movie Trailers Using Ontologies"; *IMAGE. Zeitschrift für interdisziplinäre Bildwissenschaft*, 3, 1 (2007): 117-139. Accessed August 7, 2022. DOI: 10.25969/mediarep/16750; D. Verhoeven, B. Coate, V. Zemaityte, "Re-distributing Gender in the Global Film Industry: Beyond #MeToo and #MeThree", *Media Industries Journal*, 6, 1 (2019): 135-155. Accessed August 7, 2022. DOI: 10.3998/mij.15031809.0006.108; S. Sreenivasan, "Quantitative Analysis of the Evolution of Novelty in Cinema through Crowdsourced Keywords", *Scientific Reports*, 3, 1 (2013): 1-11. Accessed August 7, 2022. DOI: 10.1038/srep02758; N.K. Rao, B. Naseeba, N.P. Challa, S. Chakrvarthi, "Web Scraping (IMDB) Using Python", *Telematique*, 2022: 235-247.

<sup>29</sup> M. Fanchi, M. Tarantino, "Has Digital Transformation Impacted Gender Imbalance in Italian Cinema? A Data Analysis of Creative Clusters 2004-2016", in *Digital Transformation in the Cultural and Creative Industries*, edited by M. Massi, M. Vecco, Y. Lin, London: Routledge, 2020: 162-184; M. Fanchi, M. Tarantino, "Donne e reti creative nel cinema italiano (2004-2016)", *Economia della Cultura*, 29, 4 (2019): 523-530. Accessed August 7, 2022. DOI: 10.1446/96648.

<sup>30</sup> J. Otterbacher, "Gender, Writing and Ranking in Review Forums: A Case Study of the IMDb. Knowledge and Information Systems", 35, 3 (2013): 645-664. Accessed August 7, 2022. DOI 10.1007/s10115-012-0548-z; K. Boyle, "Gender, Comedy and Reviewing Culture on the Internet Movie Database", *Participations*, 11, 1 (2014): 31-49. Accessed August 7, 2022. <http://www.participations.org/Volume%2011/Issue%201/3.pdf>.

<sup>31</sup> Z. Blaskó, E. Papadimitriou, A.R. Manca, "How Will the COVID-19 Crisis Affect Existing Gender Divides in Europe?", Luxembourg: Publications Office of the European Union, 2020. Accessed August 7, 2022. DOI: 10.2760/37511; D.R. Eikhof, "COVID-19, Inclusion and Workforce Diversity in the Cultural Economy: What Now, What Next?", *Cultural Trends*, 29, 3 (2020): 234-250. Accessed August 7, 2022. DOI: 10.1080/09548963.2020.1802202.

<sup>32</sup> <http://www.imdb.com/interfaces>.

<sup>33</sup> <https://cinemagoer.github.io/ecosystem/>.

‘documentary’, and ‘reality’ under ‘Genre’ were removed<sup>34</sup> to leave us with the set of data to review<sup>35</sup>. Data items were considered at series level, not at season or episode level<sup>36</sup>. For each audiovisual serial product, the professional crew names were extrapolated from the database. Data storage was done on MongoDB<sup>37</sup>. Data analysis was performed with R version 4.2.1<sup>38</sup>.

Like many other databases, IMDb lacks proper information about gender. Several gender detection algorithms have been developed and critically discussed<sup>39</sup> to infer gender from available data. Based on the names of the professionals involved, we automatically assigned genders using the *genderize.io* API<sup>40</sup>. This name-based gender inference tool also works well with diminutives or nicknames<sup>41</sup>. Clearly, these approaches have some limitations. A gender dichotomy might reinforce a non-inclusive gender concept and further marginalised individuals who do not identify as women or men. From an ethical point of view, to increase the correctness of the data, it would be preferable to ask for self-identification, “since it avoids the offensiveness of assigning categories to individuals, while allowing for inclusion of identities beyond the gender binary”<sup>42</sup>. However, for large scale assessment, self-identification is not achievable and the use of automated methods to infer gender from available data is unavoidable.

Data collected from IMDb considered 77 Italian audiovisual serial productions on generalist TV and 12 on pay platforms from 2016 to 2019. We gathered data on 4,451 professionals and 8,974 credits<sup>43</sup>, distributed among 26 professional roles or across departments<sup>44</sup> (i.e., a professional can be involved in several productions in the same role or in different roles). Figure 1 shows the 26 sectors surveyed<sup>45</sup> and the overall labour distribution: camera and electrical department (1,455 credits), sound crew (963 credits), visual effects (928 credits), writers (926), assistant directors (597 credits), and production managers (446 credits) were the most populous sectors.

<sup>34</sup> The genres that were included were ‘action’, ‘adventure’, ‘biography’, ‘comedy’, ‘crime’, ‘drama’, ‘family’, ‘fantasy’, ‘film-noir’, ‘history’, ‘horror’, ‘music’, ‘musical’, ‘mystery’, ‘romance’, ‘sci-fi’, ‘talk-show’, ‘thriller’, ‘war’, and ‘western’.

<sup>35</sup> Data obtained from IMDb was reinforced via a manual check of each product to make sure nothing had been excluded or incorrectly included.

<sup>36</sup> Data on episode crew is often available only for the most successful productions.

<sup>37</sup> <https://www.mongodb.com/productions/compass>.

<sup>38</sup> <https://www.r-project.org/>.

<sup>39</sup> For a review see L. Santamaría, H. Mihaljević, “Comparison and Benchmark of Name-to-Gender Inference Services”, *PeerJ Computer Science*, 4 (2018): e156. Accessed August 7, 2022. DOI 10.7717/peerj-cs.156.

<sup>40</sup> <https://genderize.io/>.

<sup>41</sup> D.A. Menéndez, J.M. González-Barahona, G. Robles, “Damegender: Writing and Comparing Gender Detection Tools”. InSATTtoSE, 2020. Accessed August 7, 2022. <https://easychair.org/publications/preprint/GT7d>.

<sup>42</sup> Santamaría, Mihaljević, “Comparison and Benchmark of Name-to-Gender Inference Services”.

<sup>43</sup> The term ‘credits’ refers to the number of jobs undertaken by a professional over a time span (i.e., one professional can have more than one credit in the same role and/or in a different role) while the term ‘workforce’ refers to the total number of people, which in our case is 4,451 professionals.

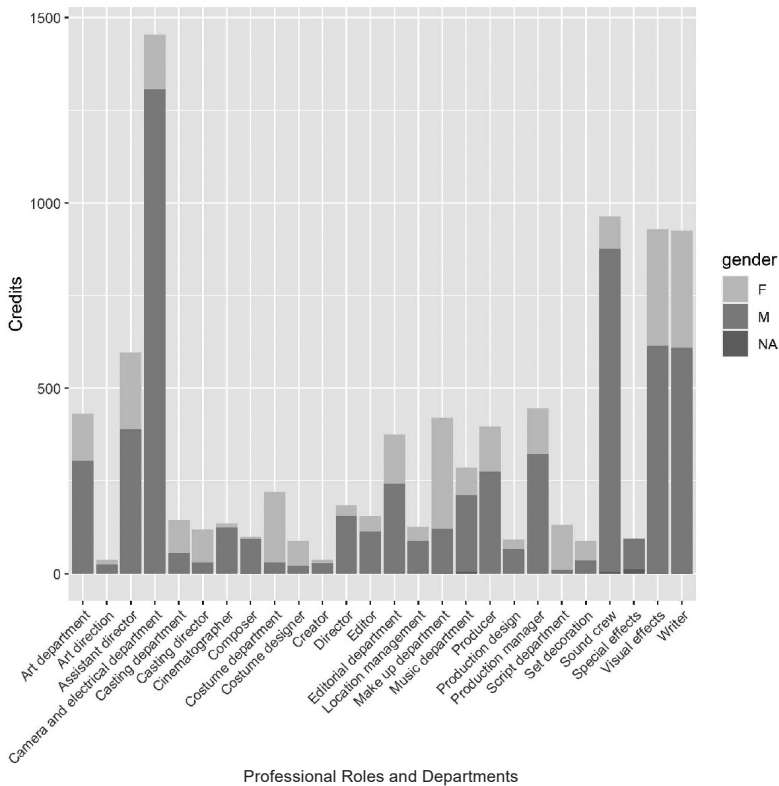
<sup>44</sup> We considered as ‘professional roles’ those positions that are clearly defined (e.g., casting director, cinematographer, director); we considered as ‘departments’ those groupings that can be characterized by different professional roles but which all fall within a specific area (e.g., costume department, art department, music department).

<sup>45</sup> To see a complete list and definition of each role and department, see IMDb’s page on “Filmography credits”, [https://help.imdb.com/article/contribution/filmography-credits/eligible-credits/GFXKZE9VXLB-5CR8M?ref=helpart\\_nav\\_11#](https://help.imdb.com/article/contribution/filmography-credits/eligible-credits/GFXKZE9VXLB-5CR8M?ref=helpart_nav_11#).

3. RESULTS

We found that women's labour constituted 33% of the workforce engaged in the production of Italian TV series from 2016 to 2019. Of the 1,467 individual female professionals working behind the scenes (2,737 credits), 1,319 of them were involved in 2,390 credits for generalist TV productions and 288 were involved in 347 credits for pay platform productions (tab. 1). Figure 1 features a barplot that shows the professional presence in terms of credits within each sector. Overall, considering the percentage of women's credits, we see that the most represented departments and/or professional roles are the script department (92%), costume department (86%), costume designers (76%), casting directors (75%), and make up department (72%)<sup>46</sup>.

Figure 1 - Barplot showing the number of credits in Italian audiovisual serial productions on generalist TV and pay platforms from 2016 to 2019. F: female professionals; M: male professionals; NA: not available (relating to professionals where name-based gender inference was unavailable)



<sup>46</sup> Other departments and professions include: casting department (62%), set decoration (60%), assistant directors (35%), visual effects (34%), writers (34%), editorial department (35%), art direction (33%), location management (31%), producers (31%), art department (29%), production design (28%), production managers (28%), editors (27%), music department (26%), creators (22%), directors (16%), camera and electrical department (10%), sound crew (9%), cinematographers (8%), composers (5%), and special effects (2%).

Table 1 - *Numbers of professionals and credits in Italian generalist TV (“G”) and pay platform (“P”) serial productions from 2016 to 2019. (“NA” relating to professionals where name-based gender inference was unavailable)*

	<i>Women</i>		<i>Men</i>		<i>NA</i>	
	G	P	G	P	G	P
No. professionals	1,319	288	2,690	590	14	4
No. credits	2,390	347	5,451	759	23	4

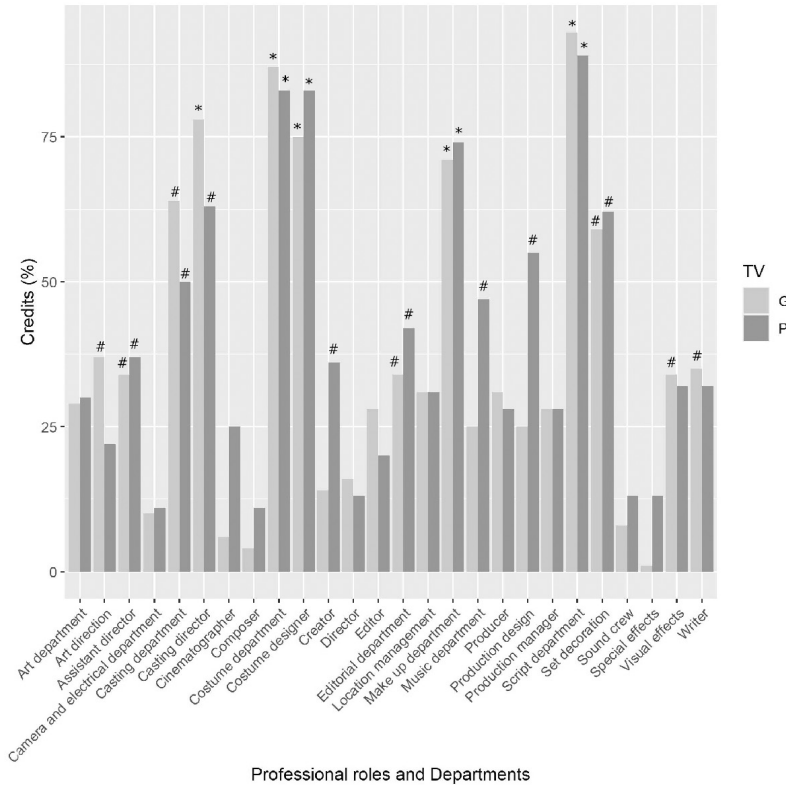
In figure 2, we evaluate the percentage of women’s labour (credits) in each sector across generalist TV and pay platform productions and identify some relevant differences. Women in generalist TV series are involved in the role of casting director, casting department and art direction 10% more than in pay platforms, while pay platform productions have a higher presence of women within production design (+30%), the music department (+22%) and cinematographers (+19%) than generalist TV. In addition, women work more frequently behind the camera as directors and editors in generalist TV productions.

To understand segregation patterns we considered which sector was male-dominated, female-dominated, or gender neutral. According to the literature, male-dominated industries, organizations and sectors are those where women comprise less than 33.3% of the total and female-dominated are those where women’s representation is 66.6% or above<sup>47</sup>. Those falling between the two percentages are considered gender neutral sectors. Within generalist TV productions we found 5 female-dominated professions, 14 male-dominated and 7 gender neutral (fig. 2). On pay platform productions there were 4 female-dominated professions, 14 male-dominated and 8 gender neutral ones (fig. 2). During the period 2016-2019, in generalist TV productions, considering the total number of women (i.e., female workforce), 30% were employed in male-dominated occupations, 28% in female-dominated occupations, and 42% in gender-neutral occupations. By contrast, in pay platform productions, considering the total number of women, 26% were employed in a male-dominated occupation, 24% in a female-dominated occupation, and 50% in a gender-neutral occupation. Across both generalist TV and pay platforms, the script department, costume department, costume design and make up department were female-dominated sectors. In addition, in generalist TV productions, casting direction was female-dominated, while set decoration was gender neutral. In pay platform productions, casting direction and set decoration were both gender neutral groups. Considering the two distribution environments, there were no female-dominated occupations that were male-dominated in one sector compared to the other, and vice versa. The three most segregated occupations in generalist TV productions were cinematographer, composer and special effects department, whereas in pay platform productions they were composer, director and sound crew departments.

<sup>47</sup> M. Torre, “Attrition from male-dominated occupations: Variation among occupations and women”, *Sociological Perspectives*, 60, 4 (2017): 665-684. Accessed August 7, 2022. DOI 10.1177/0731121416683160.



Figure 2 - Percentage of women's labour (credits) in Italian generalist TV ("G") and pay platform ("P") serial productions from 2016 to 2019; (\*) indicate female-dominated sectors; (#) indicate gender neutral sectors all the others represent male-dominated sectors



We then focused on labour mobility. In particular, we were interested in understanding whether women and men involved in Italian audiovisual productions played the same roles, what their career changes were, and whether these concerned above-the-line or below-the-line roles<sup>48</sup>.

<sup>48</sup> Above-the-line roles are defined as those in which professionals are responsible for the creative development of the audiovisual products (such as director, producer, cinematographer, and scriptwriter) while other crew members are below-the-line (e.g., editor, costume department, make up, camera and electronic department).

Figure 3 - Number of professionals (F: women, M: men) and their credits in Italian generalist TV and pay platform serial productions from 2016 to 2019. The last column specifies the professionals count in above-the-line (ATL) and below-the-line (BTL) roles

	Professionals involved in the same role		Professionals involved in different roles	
	Once	Multiple times	Total	Per type of role
Generalist TV	F: 789 (789 credits) M: 1,498 (1,498 credits)	F: 324 (1,007 credits) M: 718 (2,372 credits)	F: 81 (274 credits) M: 193 (784 credits)	changes in ATL roles: F: 16 M: 57
				changes in BTL roles: F: 40 M: 76
				changes across ATL and BTL roles: F: 25 M: 60
Pay platform	F: 136 (136 credits) M: 247 (247 credits)	F: 8 (21 credits) M: 20 (50 credits)	F: 5 (7 credits) M: 26 (79 credits)	changes in ATL roles: F: 2 M: 10
				changes in BTL roles: F: 2 M: 8
				changes across ATL and BTL roles: F: 1 M: 8

In figure 3 we consider the total number of professionals and credits over the entire corpus to establish: (I) the number of women who had only one credit each; (II) the number of women who had multiple credits within the same role; (III) the number of women who changed roles, considering also those changes that involved above-the-line roles, below-the-line roles, and a mix between the two. Considering individual mobility patterns, we found that the percentage of women and men who held only one role was higher on pay platforms (women: 91%; men: 84%) than on generalist TV productions (women: 66%; men: 62%). The presence of women and men in multiple credits for different professional roles was higher on generalist TV (women: 7%, men: 8%) than on pay platforms productions (women: 3%, men: 9%). This may suggest greater mobility patterns and longer careers for generalist TV professionals, but this needs further investigation over a longer time span.

Finally, we were interested in understanding whether female professionals who worked for generalist TV productions were also involved in pay platform productions and vice versa, and what roles they played. We found that 131 female professionals (510 credits) worked in the same role for generalist TV and pay platform productions (18 professionals in above-the-line roles, 112 working below-the-line, and 1 professional in the same role both above- and below-the-line), while 25 professionals (69 credits) had different roles (5 professionals in above-the-line roles, 14 working below-the-line, and 6 professionals in both). From a comparative perspective, we found that 295 male professionals (1,266 credits) worked in the same role across both generalist TV and pay platform productions (41 professionals in above-the-line roles, 253 below-the-line, and 1 professional in the same roles both above- and below-the-line) while 42 professionals (135 credits) had different roles (5 in above-the-line roles, 20 working below-the-line, and 17 professionals in both).

#### 4. DISCUSSION AND CONCLUSION

In this paper, we have considered the intersection between women and labour in serial production for generalist TV and pay platforms in the period 2016-2019. We imple-

mented a data-driven exploratory analysis that used IMDb as a data source. We found that gender inequity remains ubiquitous. Overall, the proportion of positions occupied by women in generalist TV and pay platform productions was the same (33%), also considering their distribution in male-dominated, female-dominated and gender-neutral roles. Considering specific roles/departments, some considerable differences can be seen between the two contexts. Women in generalist TV serials are hired more often as casting directors, in the casting department and in art direction, while pay platform productions employed more female professionals as production designers, in the music department, and as cinematographers. In contrast with Lauzen's US-based study discussed in the introduction which found that programmes on streaming services had substantially higher percentages of women working as creators, directors, and editors than broadcast programmes<sup>49</sup>, the present research found that in Italy women work more frequently behind the camera as directors and editors in generalist TV productions. Finally, considering individual mobility patterns, the data points to greater mobility patterns and longer careers for generalist TV female professionals. However, a significant difference was detected in men's higher mobility between jobs in generalist TV and pay platform productions compared to their female peers. It would be interesting to extend the corpus over a wider period of time to better observe the development of career paths in the Italian screen industry.

Considering the second aim of this article, we have identified several potential advantages and some limitations of using IMDb as a data source. IMDb allows for the analysis of both segregation patterns (it is possible to track the mobility of women in male-dominated professions and men in female-dominated professions) and the mobility of individual workers (the evolution of their careers). In addition, it may be useful in assessing such changes among professional roles and departments in different environments (e.g., generalist TV versus pay platforms) but also within different countries and genres over time.

IMDb might thus provide useful information and patterns that may help guide further study. However, we have also identified some limitations. The first is that data from IMDb may not be complete. Indeed, users enter the information we scraped and, while this collective work represents an enormous opportunity for conducting large-scale research that would otherwise be difficult to perform, it also means gaps may emerge in the descriptive records of the professionals involved in the production, especially at the level of individual episodes. However, we should stress that, whilst some caution is necessary when dealing with limited corpora, these considerations become less significant when the scale of the research is enlarged. In addition, it would be necessary to assess which positions are actually occupied within the departments, as these can vary greatly in terms of work and salary. In the future, further studies are needed to test the reliability of IMDb.

The second limitation is connected to the fact that "data alone is not enough for successful advocacy [...] a successful advocate will also pair these data with deep contextual analysis, bringing to light the stories of girls and women affected by the issues"<sup>50</sup>. Indeed, the relationship between gender and media production does not stop solely at the number

<sup>49</sup> Lauzen, "Boxed in: Women On Screen and Behind the Scenes on Broadcast and Streaming Television in 2020-21".

<sup>50</sup> A. Connell, A. Holder, H. Kearney, "Equal Measures 2030: A New Approach for Advocacy and Influencing Beyond Beijing+ 25", *Gender & Development*, 28, 2 (2020): 405-423. Accessed August 7, 2022. DOI 10.1080/13552074.2020.1750218.

of males and females working in these industries, and “it is necessary to go beyond the ‘body count’ and to start looking at specific social practices, embodied in conventions and rules, formally and informally, based on history and tradition, sustained by people working in the media organizations”<sup>51</sup>. The increased participation of women in the workforce cannot automatically be interpreted as empowerment<sup>52</sup>. We are currently investigating women’s conditions and experiences in 10 Italian film production companies involved in serial production, in order to understand how production companies in Italy can help women manage possible motherhood penalties that may increase discontinuous career pathways, and reduce gender pay gaps. Finally, a third limitation is related to the binary view of gender that was discussed previously.

We are still a long way from the ‘equal opportunities’ model. Despite the numerous laws and policy objectives promulgated in recent decades by the European Union, inequalities between men and women are deeply rooted in working practices that significantly disadvantage women<sup>53</sup>. We need policies that can provide adequate frameworks for the media to operate in, while contributing to transforming unequal gender relations, at the national level as well as at the level of media organizations<sup>54</sup>. Gender quotas, the theory of womenomics, and the concept of diversity management (i.e., the idea that increasing women’s employment rates will benefit the whole society from an economic point of view) are some of the tactics that have been used to accelerate this process<sup>55</sup>. Italy has recently defined a “National Strategy for Gender Equality 2021-2026”, with the goal of gaining five points in the ranking of the Gender Equality Index. The Strategy identifies specific measures to increase the employment rate of women, such as tax relief initiatives for companies hiring women, incentives to return to work after maternity leave, and monitoring diversity in governance in both private companies and public administration.

As underlined by Karen Byerly and Carolyn Ross<sup>56</sup>, ‘who’ is involved in production matters for media content, and as other researchers have pointed out, the rationale for the vast amount of research on gender and media production is that achieving critical mass is vital<sup>57</sup>. Critical mass theory<sup>58</sup> assumes that once enough women take part in media production (with an emphasis on key behind-the-scenes roles), media content will become unbiased regarding gender representation. However, “critical mass is only

<sup>51</sup> M. De Bruin, “Gender, Organizational and Professional Identities in Journalism”, *Journalism*, 1, 2 (2000): 217-238. Accessed August 7, 2022. DOI 10.1177/146488490000100205.

<sup>52</sup> D.J. Liebowitz, S. Zwingel, “Gender Equality Oversimplified: Using CEDAW to Counter the Measurement Obsession”, *International Studies Review*, 16, 3 (2014): 362-389. Accessed August 7, 2022. DOI: 10.1111/misr.12139.

<sup>53</sup> A. Genders, *An Invisible Army. The Role of Freelance Labour in Bristol’s Film and Television Industries*, Bristol: University of the West of England.

<sup>54</sup> C. Padovani, R. Bozzon, “Media Gender-Equality Regimes: Exploring Media Organisations’ Policy Adoption across Nations”, in *Comparing Gender and Media Equality Across the Globe: A Cross-National Study of the Qualities, Causes, and Consequences of Gender Equality in and through the News Media*, edited by M. Djerf-Pierre and M. Edström, Nordicom: University of Gothenburg, 2020: 99-144. Accessed August 7, 2022. DOI 10.48335/9789188855329-3.

<sup>55</sup> S. Capecchi, *La comunicazione di genere: prospettive teoriche e buone pratiche*, Rome: Carocci, 2018, 93-94.

<sup>56</sup> K. Ross, C.M. Byerly, *Women and Media: International Perspectives*, Maidenhead-Malden: Blackwell, 2004.

<sup>57</sup> Krijnen, Van Bauwel, “Gender and Media: Representing, Producing, Consuming”.

<sup>58</sup> For the first studies on critical mass theory, see R.M. Kanter, “Some Effects of Proportions on Group Life”, in *The Gender Gap in Psychotherapy*, edited by P.P. Rieker, E. Carmen, Boston: Springer, 1977: 53-78; and more recently C. Sarah, L.K. Mona, “Critical Mass Theory and Women’s Political Representation”, *Political Studies*, 56, 3 (2008): 725-736. Accessed August 7, 2022. DOI: 10.1111/j.1467-9248.2007.00712.x.

useful if we discard the belief that a single proportion holds the key to all representation needs of women and if we discard notions that numbers alone bring about substantive changes in policy processes and outcomes”<sup>59</sup>. Inequalities in employment and remuneration are entrenched. To achieve gender equality, production companies must do more than simply ‘check a box’ when casting a production, or make a ‘gender hire’ behind the camera. Joan Acker<sup>60</sup> acknowledges that inequality regimes are fluid and subject to change, and that pushing to enact transformation often meets with resistance. Research, concrete action and debates increase the visibility of inequalities and create possibilities for disruption because they counter the taken-for grantedness of privilege.

<sup>59</sup> S. Grey, “Numbers and Beyond: The Relevance of Critical Mass in Gender Research”, *Politics & Gender*, 2, 4 (2006): 492-502. Accessed August 7, 2022. DOI: 10.1017/S1743923X06061149.

<sup>60</sup> Acker, “From Glass Ceiling to Inequality Regimes”.