BIASED DAMAGES AWARDS: GENDER AND RACE DISCRIMINATION IN TORT TRIALS

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ABSTRACT

Current U.S. tort law incentivizes potential tortfeasors to target members of underprivileged social groups by using gender and race-based statistical tables (life expectancy; work-life expectancy and average wage) to award damages. Legal scholars have long criticized this practice from the point of view of distributive justice but supported it on welfarist grounds. Recent research in law and economics has however cast doubts on the efficiency of this practice. On this basis, some propose abandoning it in favor of gender and race neutral tables. In this article, I contribute to this debate by analyzing from a behavioral law and economics perspective the welfare effect of using gender and race-based statistical tables. The analysis reveals that, even from a welfarist perspective, once we relax rationality assumptions, we should use gender and race neutral tables. I also develop a comparative analysis of the use of statistical tables in England, France, Italy and the U.S. With some minor exception, contrary to the U.S., European courts (especially in France and Italy) adopt gender and race neutral tables to award damages in tort trials. Based on the proposed behavioral law and economics analysis I conclude that European legal systems are therefore more in line with welfarist considerations and that U.S. courts should abandon the use of gender and race-based statistical tables in favor of neutral ones. I also argue that the European approaches could provide useful guidance to American courts on alternative methods to award damages.

I. INTRODUCTION

Should courts tailor tort damages awards on the race of the victim? European and U.S. tort law answer this question in a diametrically opposite way. The latter say yes and the former say no. Contrary to the European approach, U.S. tort law allows courts to establish damages awards on the basis of gender and race-based statistical tables (life expectancy; work-life expectancy and average wage). As recently highlighted by Ronen Avraham and Kimberly Yuracko this practice provides targeting incentives against underprivileged social groups.[1]

Generally, tort law incentivizes targeting underprivileged individuals by linking damages awards to the socioeconomic status of the

[1] Ronen Avraham & Kimberly Yuracko, *Torts and Discrimination*, 78(3) OHIO ST. L. J. 661 (2017). Notice that in this context, targeting refers to the redirection of unintentionally created expected harm.

victim. Given the current socioeconomic structure of American society, these incentives are skewed against people of color. If the income of the victim is taken into account to establish losses of future earning capacity, ceteris paribus, harming a high earning individual is costlier. This higher cost provides incentives to target low income people. For instance, imagine a manager that faces the choice of investing in maintenance in one of two factories to reduce local pollutants. If one of the two factories is located in a high-income neighborhood and the other in a low-income neighborhood, current tort law incentivizes the manager to invest in the factory located in the high income neighborhood. Since, in contemporary American society, Black people earn on average less than white people [2] and spatial segregation along racial lines is a pervasive phenomenon[3] tort law often incentivizes tortfeasors to target people living in prevalently Black neighborhoods.[4] These incentives exist regarding both tortfeasors' care level and activity level.[5] In the following I will elaborate step by step on how the use of race-based statistical tables in tort trials further strengthens these incentives.

To start with, governmental authorities in most Western countries gather population data on life expectancy;[6] work-life expectancy;[7] average wage. These data are organized in tables and made available to the public. Courts often rely on these tables to estimate various types of damages in tort trials.[8] For instance, life-expectancy tables are often used to estimate the future medical costs of treatments that a victim of a tort has to endure throughout the course of their life as a consequence of the accident. Similarly, work-life expectancy tables and average income tables can be used to estimate the future losses of earning capacity. Some governments build statistical tables distinguishing along racial and gender lines (hereinafter non-blended tables) and aggregating data for the whole population (hereinafter blended tables).[9] In these circumstances, courts might be put in the situation to choose whether to use blended or

2 *See* CENSUS BUREAU TABLE P-4. RACE AND HISPANIC ORIGIN OF PEOPLE (BOTH SEXES COMBINED) BY MEDIAN AND MEAN INCOME, https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-income-people.html.

3 *See*, for instance, Douglas Massey & Jonathan Tannen, *A Research Note on Trends in Black Hypersegregation*, 52(3) DEMOGRAPHY 1025, 1029-31 (2015) (discussing different degrees of Blacks spatial segregation across different U.S. metropolitan areas).

4 Avraham & Yuracko, *supra* note 2. The role of gender and race in the determination of damages awards goes beyond income differences between these social groups, *infra* Part IV.

5 *Id*.

6 Life expectancy is the average residual number of years that a person at a certain age is expected to live.

7 Work-life expectancy is the average residual number of years that a person at a certain age is expected to work.

8 *See* below *infra*, Part III, for a discussion of the use of these tables in various Western countries.

9 This is how statistical tables are referred to as by Ronen Avraham and Kimberly Yuracko in Avraham & Yuracko, *supra* note 2, at 7.

non-blended tables to award damages. This choice can have a non-trivial impact on targeting incentives. Indeed, given the current gaps in socioeconomic status across gender and racial groups in many Western societies,[10] the differences in damages awarded on the basis of non-blended tables can be substantial. For instance, according to the U.S. Census Bureau, in 2015 the average yearly income of a White male was 60,448 dollars, which was considerably higher than the average yearly income of a Black male (38,846 dollars) as well as of a White female (36,275 dollars) and a Black female (30,710 dollars) in the same year.[11] Imagine that a judge is called to assess the loss of future earning capacity of a Black and a White two years old child on the basis of these tables.[12] Even ignoring potential differences in terms of work-life expectancy (which in reality is lower for Black people and for women compared to White men),[13] by multiplying the abovementioned sums for a work-life expectancy of 35 years, the resulting damages awards would be respectively of: 2,115,680 dollars (White male); 1,359,610 dollars (Black male); 1,269,625 dollars (White female); 1,074,850 dollars (Black female). These differences can affect the incentives of potential tortfeasors in a non-trivial way. Indeed, in this example, shifting the externality from a White man to a Black woman can reduce the expected liability of a tortfeasor by about 50%.

The overall result of the analysis is that the use of gender and race-based statistical tables provides tortfeasors targeting incentives against females and Blacks in a wide variety of settings. These findings are corroborated by various streams of empirical research, which indicate the existence of racial disparities in exposure to harm with regards to environmental hazard, medical malpractice and lead paint.[14]

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10 *See*, Goran Dominioni, et al., *A Mathematical Approach to Study and Forecast Racial Groups Interactions: Deterministic Modeling and Scenario Method*, QUALITY AND QUANTITY 1, 21 (2017) (estimating that to close the socioeconomic gap between Blacks and Asians in contemporary American society, the income of Black people should be increased substantially).

11 *See* U.S. Census Bureau, Race and Hispanic Origin of People by Mean Income and Sex, (Table P-3), United States Census Bureau, http://www.census.gov/data/tables/time-series/demo/income-poverty/historical-income-people.html.

12 For simplicity, imagine that this calculation is made by multiplying the average income of the racial and gender group of the victim by the work-life expectancy of the victim. As it will be discussed in Part II, this method is very similar to the one currently used by many U.S. courts in tort trials.

13 Avraham & Yuracko, *supra* note 2, at 666-667.

14 *Id*. (this is not to say that differences in exposure to harm across racial groups are only due to the employment of race-based statistical tables. Indeed, other factors, such as implicit racial biases in trial settings, can account for part of these disparities); *see* Paul Mohai et al., *Environmental Justice*, 34 Annual Review of Environment and Resources, 405 (2009) (on various alternative causes of environmental hazard); Jerry Kang, et al., *Implicit Bias in the Courtroom*, 59 UCLA L. REV. 1124, (2011) ; Goran Dominioni & Alessandro Romano, *Trial (Implicit Biases)*, in ENCYCLOPAEDIA OF LAW AND ECONOMIC (Marciano and Ramello ed., Springer, 2017) (on implicit biases in trial settings).

Traditionally, legal scholarship has criticized the use of non-blended tables from the perspective of distributive justice.[15] Yet, Avraham and Yuracko have recently convincingly argued that well-established law and economic scholarship seems to support this practice because it enhances welfare by: (i) redirecting harm towards the least productive member of a society, i.e. members of social groups that on average earn less (in economics income is often seen as a proxy for productivity) and;[16] (ii) allowing tortfeasors to adjust their investments in precautionary measures to victims' willingness to pay to reduce the risk of suffering a loss from an accident.[17] However, in the same article Avraham and Yuracko have also argued that a closer inspection reveals that the use of non-blended tables is not in line with the achievement of efficiency.[18] In their view, damages awarded on the basis of non-blended tables may reduce social welfare because blended tables: (i) are inherently less accurate than blended ones; (ii) capture differences in socioeconomic status that are the result of market failures and; (iii) do not take into account people's preferences for fairness.[19] Yet, as they admit themselves, on the basis of neoclassical economics, it is "extremely difficult to establish that targeting the disadvantaged (an incentive the use of non-blended tables provide) is inefficient."[20] Thus, it remains controversial whether blended or non-blended tables are the best policy choice from a "welfarist" perspective.

In the present article, I argue that the use of blended tables increases the efficiency of tort law vis-à-vis non-blended tables. In particular, I analyze the welfare effects of the two approaches (blended vs. non-blended tables) from a behavioral law and economics standpoint. Taking

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15 Jennifer B. Wriggins, *Damages in Tort Litigation: Thoughts on Race and Remedies, 1865–2007*, 27 REVIEW OF LITIG. 37, 55 (2007); MARTHA CHAMALLAS & JENNIFER B. WRIGGINS, THE MEASURE OF INJURY: RACE, GENDER, AND TORT LAW (2010); Laura Greenberg, Comment, *Compensating the Lead Poisoned Child: Proposals for Mitigating Discriminatory Damage Awards*, 28 B.C. ENVTL. AFF. L. REV. 429, 430 (2001); Martha Chamallas, *The Architecture of Bias: Deep Structures in Tort Law*, 146 U. PA. L. REV. 463, 81–83 (1998); Sherri R. Lamb, *Toward Gender-Neutral Data for Adjudicating Lost Future Earning Damages: An Evidentiary Perspective*, 72 CHI. KENT L. REV. 299, 338 (1996); *see also* Elaine Gibson, *The Gendered Wage Dilemma in Personal Injury Damages*, *in* TORT THEORY 185, (Ken Cooper-Stephenson & Elaine Gibson eds., 1993); Ken Cooper–Stephenson, *Damages for Loss of Working Capacity for Women*, 43 SASKATCHEWAN L. REV. 7 (1978–79).

16 Avraham & Yuracko, *supra* note 2, at 698.

17 *Id*. (in law and economics the willingness to pay of a victim to reduce risks of accidents is often seen as the right measure to determine the investments that a tortfeasor should make to reduce the risks deriving from his activity. Since victims' willingness to pay is constrained by her wealth, the use of tables that differentiate between the income of different social groups is seen as providing a better proxy for victims' willingness to pay than blended ones. See on this Part III); *see also* Ariel Porat, *Misalignments in Tort Law*, 121 YALE L. J. 82, 100-101 (2011) (discussing the use of victim's willingness to pay to determine social losses from accidents).

18 Avraham & Yuracko, *supra* note 2, at 8.

19 *Id*. at 667

20 *Id*. at 666.

a behavioral perspective on this issue provides new welfare-based arguments in favor of blended tables. In addition, it highlights that some of the pro-blended tables arguments based on neoclassical economics are much stronger than previously thought. In this sense, my study complements and supports Avraham and Yuracko's analysis according to which law and economics scholarship should back the use of blended tables.

The second major contribution of this article is to provide a comparative analysis on the employment of statistical tables in the U.S., English, French and Italian tort law systems. These last three are major traditions in European tort law and thus the analysis can provide some insight on how European courts deal with this issue. The analysis shows that contrary to the U.S. experience, European courts use blended tables for race. Also, with the partial exception of England, gender-based tables have only a minor role in the establishment of tort law damages in Europe vis-à-vis in the U.S. This comparative analysis is performed in Part II. Thus, on the basis of this study, targeting incentives towards members of disadvantaged minorities and females tends to be less strong in Europe than in the U.S. system. The targeting incentives that derive from these practices are discussed in Part III.

Building on existing literature, in Part IV I discuss, in details, the neoclassical law and economics arguments in favor and against the use of blended and non-blended tables. In addition, I provide new empirical evidence supporting some of the arguments pro blended tables.

Part V complements the analysis of Part IV by building on three strands of literature in behavioral law and economics.[21] The first strand of literature considered is the one on the outgroup homogeneity bias, i.e. the human tendency to perceive members of social groups to which we think we do not belong as being more homogeneous than they actually are.[22] Recent literature in behavioral law and economics has shown that courts' decisions influenced by this bias decrease the efficiency of tort law systems.[23] In this article, I show that the use of non-blended tables is likely to increase the influence of the outgroup homogeneity bias on courts' decisions, and thus lead to higher welfare losses vis-à-vis blended tables. The second behavioral phenomenon considered here is anchoring, meaning the influence of irrelevant information (the anchor) on human judgement.[24] Contrary to blended tables, non-blended ones provide

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21 *See generally* Jolls Christine et al. *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471 (1998) (on behavioral law and economics).

22 Judd et al. *Attributions of Intergroup Bias and Outgroup Homogeneity to Ingroup and Outgroup Others*, 35 EUR. J. SOC. PSYCHOL. 677, 677-82 (2005).

23 Yoed Halbersberg & Ehud Guttel, *Behavioral Economics and Tort Law*, *in* THE OXFORD HANDBOOK OF BEHAVIOURAL ECONOMICS AND THE LAW 430-432 (Eyal Zamir and Doron Teichman ed., 2014).

24 Amos Tversky & Daniel Kahneman, *Judgment under Uncertainty: Heuristics and Biases*,

judges with different anchors depending on the race and gender of the victim. These anchors can affect the establishment of damages that should not be influenced by, for instance, the average income of the group of the victim. As a result non-blended tables are likely to increase disparities in damages awards across gender and racial groups. In turn, these increased disparities will lead to a less efficient spreading of losses in society[25] and to a tort law system that takes even less into account people's preferences for fairness. Inefficient loss spreading is also an argument in favor of the use on blended tables in light of the third behavioral phenomenon considered here, i.e. the willingness to accept-willingness to pay (WTA-WTP) gap.[26] Empirical evidence shows that people's WTP to avoid a risk of losses if often lower than their WTA to be exposed to the same risk.[27] Economists and lawyers debate on which of the two measures is a better estimate of victims' preferences to determine the optimal level of care of tortfeasors.[28] Since contrary to WTP, WTA is not constrained by wealth, the adoption of WTA as the measure of victims' preferences would lead to a more equitable distribution of losses across social groups. In this article I argue that this type of distribution is likely to be more efficient from the point of view of loss spreading and, incidentally, might better resemble the distribution of losses that one would have if blended tables were employed vis-à-vis non-blended ones.

The overall analysis supports the conclusion that blended tables are superior to non-blended ones not only on fairness but also on welfarist grounds. As such, Part VI argues that courts on both sides of the Atlantic (and especially the U.S. ones) should abandon the use of non-blended tables. Some European tort law systems seem to be more in line with this recommendation and ideally, can provide inspiration to U.S. courts.

II. GENDER AND RACE-BASED STATISTICAL TABLES: A COMPARATIVE ANALYSIS

Having explained the dynamics that lead to targeting, in this Part I discuss the employment of gender and race-based statistical tables in

185 SCIENCE, no. 4157, 1974, at 1124, 1128.

25 Loss spreading refers to the optimal allocation of the risk of losses among victims and tortfeasors given their risk preferences. *See generally* STEVEN SHAVELL, ECONOMIC ANALYSIS OF ACCIDENT LAW, ch. 5, §§5.1-5.2, at 105-07 (First Harvard Univ. Press paperback ed. 2004) (1987). *See also* discussion *infra* Section IV(b).

26 John K. Horowitz & Kenneth E. McConnell, *A Review of WTA/WTP Studies*, 44 J. OF ENVTL. ECON. AND MGMT. 426 (2002).

27 Jack L. Knetsch, *The Curiously Continuing Saga of Choosing the Measure of Welfare Changes*, 6 J. OF BENEFIT-COST ANALYSIS 217, 218 (2015).

28 *See id*.

various jurisdictions. Since a large part of the literature on the employment of group-specific statistical tables comes from the U.S., the starting point of this analysis is the U.S. tort law practice. The analysis is then extended to three European countries: England, France and Italy. The aim of this Part is to understand whether issues arising from the employment of these tables in U.S. trials are present also in European tort law. I focus on England, France and Italy in order to account for potential discrepancies that may arise from differences in the legal traditions (Common law-Civil law)[29] within the European experience. Among the European countries that adopt a Civil-law system, I chose to compare Italy and France because in a legal analysis that is built along gender and racial issues, it can be interesting to compare countries in which different situations prevail in this respect. In this regard, France has experienced strong immigration from African countries starting from the 1950's;[30] while in Italy the phenomenon is much more recent.[31] Relatedly, widespread socioeconomic inequalities between racial groups have persisted for a longer period in the recent history of France than in Italy.[32] Similarly, women's job market conditions (which are reflected in statistical tables) are quite different in these two countries. With women scoring relatively better in terms of employment rate in France than in Italy and a much lower gender pay gap in Italy than in France.[33] Thus, the rate at which courts have been confronted with racial/gender issues related to socioeconomic measures reflected in statistical tables might be very different in the two countries.

A. United States

As recently highlighted by Avraham and Yuracko,[34] gender and race have a major role in determining damages under U.S. tort law. This role is largely due to the employment of gender and race-based statistical tables. In this section I discuss U.S. courts' use of these tables as a basis

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29 England is usually seen as a Common Law system, while France and Italy belong to the Civil Law tradition. *See* SIMONA GROSSI, THE U.S. SUPREME COURT AND THE MODERN COMMON LAW APPROACH, 117 (Cambridge Univ. Press) (2015).

30 Eloisa Vladescu, *The Assimilation of Immigrant Groups in France–Myth or Reality?* 1 (Jean Monnet/Robert Schuman Paper Series, Vol., 5 No. 39, 2006).

31 Eur. Commission, *European Migration Network: Impact of Immigration on Europe's Societies*, at 25, (March 2006), https://ec.europa.eu/home-affairs/sites/homeaffairs/files/e-library/documents/policies/legal-migration/pdf/general/emn_immigration_2006_en.pdf.

32 *See* Roxane Silberman, et al., *Segmented Assimilation in France? Discrimination in the Labour Market Against the Second Generation*, 30 ETHNIC AND RACIAL STUD. no. 1, at 1 (2007) (discussing racial and ethnic discrimination in France.)

33 Eurostat, *Gender Statistics*, (2017), http://ec.europa.eu/eurostat/statistics-explained/index.php/Gender_statistics.

34 Avraham & Kimberly, *supra* note 2, at 669-683.

for the comparative analysis that will follow.

A victim's life expectancy is a major component for the establishment of two types of damages:[35] i) future expenses that the victim will have to bear because of the tort (e.g. medical bills); ii) damages for future pain and suffering. In this connection, under U.S. tort law life expectancy is usually determined based on the life expectancy tables provided by the U.S. Federal Government.[36] These tables differentiate life expectancy depending on gender and (certain) racial/ethnic groups. In this regard, notice that, in the U.S., females have on average a higher life expectancy than males (respectively about 81 and 76 years) and Black people a significantly lower one than White people.[37] Without distinguishing by gender, Black people have a life expectancy of 75 years compared with the 79 years of White people.[38]

Starting from the values contained in these tables, forensic economists called to provide expert testimony in court adjust these life values based on the particular circumstances of the case.[39] For instance, if some aspect of the (pre-accident) health condition of the victim suggests that her life expectancy is lower than average, the abovementioned value will be adjusted accordingly. In performing these adjustments expert testimony rely often on statistics (e.g. relative mortality ratios which take into account, for instance, a particular medical condition or whether the victim is a smoker) that are further divided along gender and racial lines.[40] This may provide additional room for gender and racial discrepancies in the determination of damages at trial.[41] Lastly, the estimations based on these data can be further adjusted by jurors, which are called to adapt them to the specific situation of the victim.[42]

Similarly, the estimation of the losses for future earning capacity are highly influenced by the employment of work-life expectancy tables.[43] These tables provide courts with information regarding the time period for which the victim was expected to earn a (higher) wage had the

35 *Id. at 671-673.*

36 Richard B. Singer, *How to Prepare a Life Expectancy Report for an Attorney in a Tort Case*, 37 J. INS. MED. 42, 43 (2005).

37 *See* U.S. DEP'T OF HEALTH AND HUM. SERV, HEALTH, UNITED STATES, WITH SPECIAL FEATURE ON RACIAL AND ETHNIC HEALTH DISPARITIES, table 15 (2015) https://www.cdc.gov/nchs/data/hus/hus15.pdf. It is important to stress that not all racial minorities score worse than Whites when it comes to life expectancy. Noticeably, Asians' longevity is significantly higher than that of any other racial group (86 years in 2009). *See* THE HENRY J. KAISER FAMILY FOUNDATION, LIFE EXPECTANCY AT BIRTH (IN YEARS), BY RACE/ETHNICITY (2009), http://kff.org/other/state-indicator/life-expectancy-by-re/?currentTimeframe=0.

38 U.S. DEP'T OF HEALTH AND HUM. SERV., *supra* note 38.

39 Avraham & Yuracko, *supra* note 2, at 671.

40 *Id*. at 672.

41 *Id*.

42 *Id*.

43 *Id*. at 673-675.

accident not occurred. Also these tables are often divided by gender and race. Based on these tables the computation of the losses for future earning capacity is obtained by multiplying the expected future yearly wages by the expected number of working years. This time period is shorter for females than for males and for Black people than for White people.[44] The resulting sum is then sometimes adjusted by juries on the basis of the particular circumstances of the case.[45]

Lastly, in situations in which the past earnings of the victim are not available (e.g., because she is too young to have a job) or when there are reasons to believe that her future earnings would have been different from the past ones, damages are sometimes based on the average national wage.[46] Data on the average national wage is taken from the dataset provided by the Bureau of Labor Statistics, which differentiates average wages across gender and racial groups.[47] As discussed above, these values are higher for males than for females and for Whites than for Blacks. The estimations resulting from this calculus are subsequently adapted based on the specific circumstances of the case.

Along with these general trends, a few courts have recently moved towards the use of blended tables.[48] For instance, in *Wheeler* and *Tarpeh-Doe* the court adopted a race-neutral approach to establish damages for a mixed-race tort victim. Similarly, in *U.S. v. Bedonie*,[49] the district court has ruled that the use of gender and race-based damages estimations may sometimes not be warranted and that it is for the alleged tortfeasor to prove that differentiated damages awards are justified in the specific case at hand. This approach has been subsequently endorsed by the Tenth Circuit, which, however, has also specified that it is in the discretion of the lower court whether to apply differentiated estimations based on gender and race.[50] Notice that in *U.S. v. Bedonie*, the reasoning of the court was largely based on the observation that the use of gender/race-based tables was ethically unwarranted as it would have led to discriminative outcomes and to the perpetuation of existing stereotypes.[51] In a few other cases, the practice of using differentiated tables has been abandoned on a (partially) different ground, namely on the idea that gender and racial disparities captured by these tables are unlikely to accurately capture future socioeconomic trends.[52]

In conclusion, as recently highlighted by Avraham and Yuracko, the

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44 *Id*.
45 *Id*. at 675.
46 *Id*. at 676.
47 *Id*.
48 *Id*. at 677-680.
49 United States v. Bedonie, 317 F. Supp. 2d 1285, 1319 (D. Utah 2004).
50 United States v. Serawop, 505 F.3d 1112, at 1126 (10th Cir. 2007).
51 *Bedonie*, 317 F. Supp. 2d at 1319.
52 *See* Reilly v. United States, 665 F. Supp. 976, 997 (D.R.I. 1987).

use of gender/race blended tables to establish tort damages is more an exception than the rule in current U.S. tort law.[53] In the next section, I analyze whether similar trends are observable in the Italian experience.

B. Italy

The use of statistical tables to determine damages in tort trials is not foreign to the Italian experience. Yet, the relevance of race and gender for the establishment of damages is much more limited than under U.S. law. Firstly, with some exception,[54] Italian authorities do not collect data on life expectancy, work-life expectancy, and average wage according to race or ethnicity. Maybe also due to this circumstance, under Italian law, the only relevant distinction in the employment of statistical tables in tort trials is gender.

Generally, the compensation of losses for future earning capacity can take two main forms: a lump sum or a rent. When the lump sum approach is adopted, Italian courts have often relied on the following computational method: multiplying the decrease in the yearly net wage due to the accident by a capitalization rate.[55] Until recently, Italian courts have adopted capitalization rates set by the Royal Decree (R.D.) 9 October 1922, n. 1403.[56] These rates were calculated based on the mortality tables gaged from the 1911 census of the Italian population. Thus, the capitalization rate was based on a life expectancy of 54.9 years, which was the expected life of an average Italian (not considering gender disparities) in 1911. Italian courts have long adopted various strategies to reconcile the discrepancy between life expectancy and work-life expectancy. For instance, to account for this difference, courts were expected to decrease the amount resulting from the above mentioned calculus by 20/30%.[57] However, courts have often avoided utilizing this reduction to make up for the life expectancy changes since 1911. Indeed, life expectancy today in Italy is considerably higher than in 1911, with

53 Avraham & Yuracko, *supra* note 2, at 679-680.

54 *See, e.g.,* MINISTERO DELLA SALUTE, PIANO D'AZIONE SALUTE PER E CON LE COMUNITÀ ROM, SINTI E CAMINANTI (2016), http://www.salute.gov.it/imgs/C_17_pubblicazioni_2451_allegato.pdf.

55 This capitalization rate already takes into account the discount rate to be applied for the time difference between when the lump sum is received and the time in which these wages would have been earned had the victim not been involved in the accident. *See* ENZO RONCHI ET AL., GUIDA ALLA VALUTAZIONE MEDICO-LEGALE DELL'INVALIDITÀ PERMANENTE 69 (2d ed. 2015). For a full discussion of the methods used to calculate damages related to losses of future earning capacity, see *id*. at 60-80.

56 §77.4.2 - R.D. 9 ottobre 1922, n. 1403. Approvazione delle nuove tariffe per la costituzione delle rendite vitalizie della Cassa nazionale per le assicurazioni sociali, available at: http://www.edizionieuropee.it/LAW/HTML/40/zn77_04_002.html.

57 *See* Ronchi e, *supra* note 56, at 74.

males averaging 80 years and abouset years for females.[58] Because the capitalization rate adopted by R.D. n. 1403 did not distinguish between genders, the resulting amounts were equal for men and women.

The discrepancy between men and women's life expectancy was addressed in 2015 when the Corte di Cassazione (the Italian Supreme Court) adopted a new approach directing lower courts to use more recent life expectancy tables that provide different values for gender.[59] This decision was adopted on various grounds, two of which were: (1) to provide a more accurate estimate of the losses suffered by victims; and (2) to provide different estimates for males and females. The Court did not impose a specific source to be used for the determination of these losses, yet it indicated as a possible source the criteria listed in the Quaderni del CSM, 1990, n. 41 (hereinafter "CSM41").[60] The CSM41 contains updated capitalization rates that discern based on gender.[61]

Following the suggestion by the Supreme Court, lower courts have started abandoning the use of the tables contained in the R.D. n. 1403 in favor of the new approach. For instance, in a recent medical malpractice case, the Tribunale di Como (the Court of Como) issued a decision on the losses of future earning capacity on the basis of the criteria contained in the CSM41.[62] The court estimated that the accident reduced the ability of the victim to earn by 15%. The computation for the estimation of the losses was therefore the following: annual earnings (net of taxes) multiplied by the gender-based capitalization coefficient (CSM41), with the product multiplied by 15%. Subsequently, a similar calculation was applied by the Tribunale di Parma (the Court of Parma) in a traffic accident case.[63] There, however, the Court of Parma decided to reduce the damages award by 20% to account for the difference between life expectancy and work-life expectancy. The court did not refer to whether a different reduction would apply had the victim been of a different gender. Thus, despite in Italy work-life expectancy is higher for males than for females, this factor is not taken into account when determining damages awards.[64]

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58 *See Popolazione e famiglie*, Italian National Institute. NAT'L INST. OF STAT., http://www.istat.it/it/anziani/popolazione-e-famiglie (last visited Feb. 19, 2018).

59 *See* Casssez. ter., 14 ottobre 2015, n. 20615.

60 *See id*.

61 *See* CONSIGLIO SUPERIORE DELLA MAGISTRATURA, NUOVI ORIENTAMENTI E NUOVI CRITERI PER LA DETERMINAZIONE DEL DANNO, QUADERNI DEL. CSM, 1990, n. 41 (1990), http://www.csm.it/web/csm-internet/norme-e-documenti/dettaglio/-/asset_publisher/YoFfLzL3vKc1/content/quaderno-n-41-1990 [hereinafter CSM41].

62 *See* Trib. del Como, 14 gennaio 2016, n. 27.

63 *See* Trib. del Parma, 25 maggio 2016, n. 726.

64 However, the higher work-life expectancy of males (forty-five years) compared to females (forty years) in Italy is recognized in the assessment of the social costs of car accidents performed by the Italian government. *See e.g.,* MINISTERO DELLE INFRASTRUTTURE E DEI TRASPORTI, STUDIO DI VALUTAZIONE DEI COSTI SOCIALI dell'Incidentalità Stradale, DELL'INCIDENTALITÀ

Differences by gender are also not particularly relevant in the determination of the wage applicable for the abovementioned calculation. In fact, courts usually rely on various measures of income (decreased by the residual earning capacity) that do not differentiate by gender. One example of this is the national average wage or the average wage for the particular industry in which the victim was expected to work in the future.[65] When the victim is a child and/or it is difficult to forecast the future employment of the victim, courts rely on measures of income adjusted on the basis of the socioeconomic status of the family of the victim, but no distinction is made for gender.[66]

Similarly, under current Italian practice, the use of gender-based statistical tables has only a residual role concerning the award of non-economic losses. In actuality, these losses are determined using computational methods that take into account the age of the victim, but generally does not differentiate across gender groups. This occurs, for instance, with regards to the "danno biologico," which is awarded to victims who have suffered a decrease in their enjoyment of life as a result of the tort. This type of damages is a major component of pain and suffering damages compensated under Italian law.[67] The "danno biologico" is determined from a strict calculation based on tables prepared by committees of lawyers, judges and actuaries at the court level. Among the various tables elaborated by lower courts, the Italian Supreme Court has indicated the tables set forth by the Tribunal of Milan as the preferable one.[68] These tables provide invalidity points ranging from 1% to 100% (with 100% representing permanent complete invalidity), to which corresponds a pecuniary value depending on the age of the victim (regardless of gender).

In this context, the residual role played by gender is relegated to situations in which the circumstances of the case are peculiar to an extent that judges prefer to award damages partially departing from the abovementioned method. For instance, in a recent case, the Tribunale di Padova (Court of Padova) found that the application of the Milano tables would have led to a too low damages award.[69] This decision was motivated on two grounds: (1) the victim at the time of the accident had an expected life of about 50 years (given that she was 35 and life expectancy for women in Italy is about 85 years); and (2) the significant negative impact that the accident had on the life of the victim. From the decision, the temporal factor (i.e. the life expectancy of the victim), seems

STRADALE 7 (2014), http://www.mit.gov.it/mit/mop_all.php?p_id=12919.

65 *See* RONCHI, *supra* note 56, at 73.

66 *See id*. at 74.

67 *See id*. at 85.

68 *See, e.g.,* Cass., sez. ter., 15 ottobre 2015, n. 20895.

69 *See* Tribunale del Padova, 20 maggio 2016, n. 1579.

to have influenced the decision of the court. In this connection, it is not clear whether the court would have reached the same conclusion had the victim been a male (whose residual life expectancy would have therefore been around 45 years and thus shorter than the one of the victim of the accident). In this case, the court explicitly mentioned that the substantial residual life expectancy of the victim was a relevant criterion to justify the application of a different calculation than the one usually adopted, but did not specify the year threshold after which such treatment would have been justified. In this sense, gender-based life expectancy tables may sometimes impact court decisions on damages for non-pecuniary losses. Yet, their impact is (at best) relegated to exceptional circumstances.

Lastly, gender-based statistical tables on life expectancy are sometimes used to establish future expenses due to the accident. Here, the higher life expectancy of females often translates into higher damages awards.

C. England

As under Italian law, English courts do not make use of race-based statistical tables to award damages. Thus, in the following I will focus solely on the gender side of the issue.

In the English practice, damages awards for future losses of income capacity and future expenses are usually awarded in the form of lump-sums.[70] Generally, the estimation of losses of future earnings is carried out on the basis of the Ogden Tables.[71] The Working Party, of actuaries, lawyers, accountants, and other interested parties, produces and regularly updates these tables. The Ogden Tables provide a detailed set of procedures to be followed in the estimation of lump sum damages for losses of earning capacity and future expenses.[72] The basic procedure suggested by the Working Party consists in multiplying the annual expected loss/expense by a multiplier which gives the present capital value of the loss/expense. Multipliers differ depending on whether the loss is expected to: (1) continue for the whole life of the victim; (2) continue until the retirement of the victim; or (3) start from the retirement of the victim.[73] Given the higher life expectancy of females, multipliers

70 *See* CEES VAN DAM, EUROPEAN TORT LAW 361 (2d ed. 2013).

71 U.K. GOV. ACTUARY DEP'T, ACTUARIAL TABLES WITH EXPLANATORY NOTES FOR USE IN PERSONAL INJURY AND FATAL ACCIDENT CASES (7th ed. 2011), https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/245859/ogden_tables_7th_edition.pdf (hereinafter OGDEN TABLES). For courts' use of these tables see, e.g., Royal Victoria Infirmary and Associated Hospitals NHS Trust v. B (Child) [2002] EWCA Civ 348 (QB); Woodward v. Leeds Teaching Hospitals NHS Trust [2012] EWHC 2167. (QB).

72 *See*. OGDEN TABLES, *supra* note 71, at 5.

73 *See id*.

are higher for females than for males. The estimated sum is then adjusted for factors other than mortality (i.e. education, disability and employment status). This is done by multiplying the previously established sum by a number tailored to these factors.[74] Here, the multipliers are generally higher for men because of their longer work-life expectancy.[75] The resulting sum is then adjusted on the basis of the specific circumstances of the case.[76]

Gender plays a role also in establishing the wage that the victim was expected to have earned had the accident not occurred. This issue was discussed in length in *Van Wees v. Karkour*, in which the judge established that the gender wage gap reported in official statistical tables should be reflected in damages awards.[77] However, the court also argued that these tables capture only a snapshot of reality and that the wage gap will decrease in the future.[78] This factor must also be taken into account when awarding damages.[79] In addition, when the victim is a child and thus the circumstances of the case leave high uncertainty regarding her loss of earning capacity, the awards are tailored on the socioeconomic status of the parents of the victim.[80] Here, no difference is made on the basis of gender.

Just like in Italian law, the estimation of non-economic losses is mainly carried out without making reference to the pre-accident life expectancy of the victim.[81] In fact, courts usually determine pain and suffering damages on the basis of the "Guidelines for the Assessment of General Damages in Personal Injury Cases."[82] The guidelines are not binding, but in the absence of particular reasons that suggest adopting a different computational method, courts tend to follow them in assessing pain and suffering awards.[83] The guidelines contain ranges of awards per type of injury that are based on the amount of damages awarded in

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74 *See id*. at 15.

75 *Id*.

76 *Id*. at 20.

77 Van Wees v. Karkour [2007] EWHC (QB),165, 165 (Eng.). (Gender-based tables were also accepted as a legitimate source of information in the more recent case: Kate Emma Woodward v. Leeds Teaching Hospitals NHS Trust Case [2012] EWHC 2167. However, here, the judge decided not to rely on these numbers because these tables (which focused only on one industry) were not applicable to the case).

78 Van Wees v. Karkour [2007] EWHC (QB) 165. (Eng.).

79 *Id*.

80 Ken Oliphant, *Children as Victims under the Law of England and Wales*, *in* CHILDREN IN TORT LAW PART II: CHILDREN AS VICTIMS, 82, (Martín-Casals ed. 2006).

81 William V. Horton Rogers, *England – Non-Pecuniary Loss Under English Law*, *in* DAMAGES FOR NON-PECUNIARY LOSS IN A COMPARATIVE, 61 (William V.H. Rogers ed. 2006).

82 Ken Oliphant, *England and Wales*, *in* EUROPEAN TORT LAW, 213 (Koziol & Steininger ed. 2008). For the guidelines see: McKay, Colin & Great Britain Judicial Studies Board, GUIDELINES FOR THE ASSESSMENT OF GENERAL DAMAGES IN PERSONAL INJURY CASES (Oxford University Press, 2010).

83 *Id*.

previous cases. It is worth noting that the damages awards for pain and suffering contained in these tables are often calibrated on the basis of the age and the life expectancy of the victim.[84] Yet, the Guidelines do not provide different ranges of awards based on gender. Thus, in general, the higher life expectancy of a female may be reflected in the damages awards in a particular case, but this higher award may be reflected in subsequent cases regardless of whether the victim is a male or a female.

D. France

Similar to the Italian and the English experience, the racial group of the victim has no bearing in the determination of losses in French tort trials. Yet, gender influences the determination of the losses via the use of statistical tables. The life expectancy of the victim influences damages awards for future losses of income capacity and future expenses. Lump-sums are the common way in which these types of damages are awarded in French law.[85] The determination of these type of damages is obtained by multiplying the expected loss of income (or the expense) by a capitalization rate indicated in the tables published on the Gazette du Palais on April 26th, 2016 (n° 16).[86] These capitalization rates are based on the life expectancy of the French population in the period 2006-2008 and take into account an inflation rate of 1.04%.[87] The tables provide different rates depending on the period for which the victim is expected to suffer the loss. For instance, depending on whether the victim was expected to receive her last wage at 62 or 68 years old, the rate applicable for the calculation varies (ceteris paribus it is higher at 68 than at 62).[88] The tables distinguish between male and female with the latter having a higher rate reflecting their longer life expectancy. Contrary to English law, the resulting sum is not adjusted on the basis of factors other than mortality. In addition, the loss is not adjusted on the basis of gender differences in work-life expectancy. As a consequence, and everything else equal, the sum remains higher for females than for males.

Just like under Italian law, gender-based wage differences, while

84 Avraham & Yuracko, *supra* note 2, at 661.

85 Benoît Mornet, *L'Indemnisation des Préjudices en Cas de Blessures ou de Décès*, 1, 27 (2015), *available at* https://www.avocats-toulouse.com/wp-content/uploads/2015/10/Referentiel-Mornet-2015.pdf.

86 Capitalization Schedule 2016 of the Gazette du Palais (n° 16), ACTUALITÉS (Apr. 26, 2016), *available at* http://www.gazettedupalais.com/services/actualites/vie_pro/e-docs/bareme_de_capitalisation_2016_de_la_gazette_du_palais/document_actu_pro.phtml?cle_doc=00002E02.

87 *Id*.

88 *Id*.

existent,[89] are not reflected in damages awards. Instead, courts adopt either the French minimum wage (SMIC), the national average wage, or the average wage of the industry where the victim was (expected) to be employed.[90] No differentiation is made on the basis of gender. With regards to children or other situations in which it is difficult to estimate what would have been the average wage of the victim, damages are adjusted on the basis of factors such as a person's educational level and the socioeconomic status of her family.[91]

As to the estimation of non-economic losses, differences in life expectancy are generally not reflected in damages awards. Among the various types of non-economic losses compensated under French law,[92] the age of the victim is considered only for the establishment of the "déficit fonctionnel permanent."[93] The quantification of this type of damage is made following a two-step procedure. First, a sum determined on the basis of the age of the victim and the degree of invalidity caused by the accident (this invalidity is expressed as a percentage, with 100% being full invalidity).[94] The tables that provide the resulting sums vary depending on the Court of Appeal (Court d'Appel) considered. Second, this sum is then multiplied by the invalidity point (not expressed as a percentage) to obtain the full amount of damages.[95] For instance, following the tables established by the Court of Appeal of Toulouse in 2010,[96] an invalidity point of 50% suffered by a victim of age 20, corresponds to a sum of €2810 Euros, which is then multiplied by 50 resulting in a damage award of €140,500 Euros. Gender plays no role in this estimation.[97]

89 *See*, for instance, the recent estimates made by the French National Institute of Statistics and Economic Studies: Thomas Morin & Nathan Remila, Le Revenu Salarial des Femmes Reste Inférieur à Celui des Hommes, INSEE, N° 1436. (2013), *available at* https://www.insee.fr/fr/statistiques/1280986.

90 Bernard Dubuisson, *Le Dommage et sa Reparation*, par. 27, Larcier (2013). For an application of the calculus *see*, for instance, *Cour de Cassation*, 19 février 2014, n° 13-11360.

91 *See* Mornet, *supra* note 86.

92 Michel Cannarsa, *Compensation for Personal Injury in France*, 1 (2002), *available at* http://www.jus.unitn.it/cardozo/review/2002/cannarsa.pdf; Benoît Mornet, *L'Indemnisation des Préjudices en Cas de Blessures ou de Décès*, 1, 27 (2015), *available at* https://www.avocats-toulouse.com/wp-content/uploads/2015/10/Referentiel-Mornet-2015.pdf.

93 *See* Mornet, *supra* note 86.

94 *Id*. at 40.

95 *Id*.

96 Cours D'Appel de Agen, Angers, Bordeaux, Grenoble, Limoges, Nîmes, Orleans, Pau, Potiers, Toulouse, *Référentiel Indiatif Régional de L'Indemnisation Du Dommage Corporel*, 1, 12, (Nov. 2010), *available at* https://www.avocats-toulouse.com/IMG/pdf/RIRIDC-NOV.2010.pdf.

97 For an example of the application of this procedure, *see* Mornet, *supra* note 86 at 41-42.

III. COMPARATIVE ANALYSIS OF TARGETING INCENTIVES

In the previous Part, I have discussed the employment of gender and race-based statistical tables for the determination of damages under U.S., English, French and Italian tort law. When read in conjunction with the discussion of the relation between the use of gender/race-based tables and targeting,[98] the analysis provides a comparative assessment of whether, and to what extent, courts' practice incentivizes to tortfeasors to target a specific social group identified either by gender or race.

With regards to race, the analysis has shown that under English, French and Italian law courts do not use race-based statistical tables to determine the relevant measures of socioeconomic status. Thus, contrary to the U.S. experience, targeting based on the use of statistical tables is unlikely to take place in these three jurisdictions.

Table 1: Use of Non-Blended Tables for Damages Awards

	Race			Gender		
	Average Wage	Life Expectancy	Work-Life Expectancy	Average Wage	Life Expectancy	Work-Life Expectancy
England	No	No	No	Yes	Yes	Yes
France	No	No	No	No	Yes	No
Italy	No	No	No	No	Yes	No
US	Yes	Yes	Yes	Yes	Yes	Yes

Conversely, the analysis has highlighted that gender does play a role in the determination of damages across all the jurisdictions considered. Yet, the effect of gender is different in the fourpr legal systems. We have seen that the employment of gender-based wage tables takes place both under U.S. and English law. However, in the latter, courts tend to adjust the calculations based on these tables on the basis of the job market improvements that women are likely to experience in the coming future. This, in turn mitigates the targeting incentives provided by the gender wage gap captured by current statistics. The French and the Italian practice are instead insensitive to gender wage gaps, and therefore no incentives for targeting do exist in these jurisdictions with regards to this component of damages.

Similarly, France seems to be the most pro-female jurisdiction, followed by Italy, when it comes to the employment of life and work-life expectancy tables. In this regard, the current practices followed by Italian and French courts take into account gender gaps only with regards to life expectancy, which is the only measure on which females score better than

98 *See* Avraham & Yuracko, *supra* note 2; *see supra* Introduction.

males. In this sense, the use of statistical tables in Italy may provide a marginal targeting incentive to the tortfeasor to the disadvantage of males. In Italy, this incentive is likely to be small especially because pain and suffering awards are generally not established on the basis of life expectancy tables. Thus, the incentive exists solely with regards to future expenses (e.g. medical bills). In French practice, the incentive might be more substantial (yet, still limited) as the life expectancy of the victim also affects the determination of loss of future income capacity.

Conversely, both English and U.S. law take into account gender gaps in life expectancy and work-life expectancy. Since gender gaps in these two measures go in different directions, whether a victim will receive higher compensation being a male or a female depends on the specific circumstances of the case. It is beyond the scope of the present article to establish whether, overall, this practice provides incentives for targeting one of the two groups. However, notice that the fact that life expectancy plays less of a role in determining pain and suffering awards under English law limits the potential benefits that females derive from the use of gender-based tables in tort trials.

IV. ARGUMENTS IN FAVOR AND AGAINST TARGETING

When viewed through the lenses of law and economics, the primary aim of tort law is to provide incentives to tortfeasors and victims to take optimal precautions and engage in their activity at an optimal level.[99] Given this goal, conventional law and economics may support the use of non-blended tables. This view has been recently questioned.[100] This Part will review these two opposing views on the subject matter.

A. Welfarist Arguments Pro Non-Blended Tables

Classical law and economics provide two prima facie arguments in favor of the use of non-blended tables, one relates to victim's willingness to pay (WTP) for reductions in expected losses, and the second is concerned with the use of income as a proxy for productivity. In the latter argument, economists and economically minded legal scholars tend to see income as a proxy for productivity, which is often considered a social value.[101] In this view, to the extent that female and minority members earn less and work for a shorter period than white males, targeting will

99 GUIDO CALABRESI, THE COST OF ACCIDENTS: A LEGAL AND ECONOMIC ANALYSIS, (New Haven, 1970).

100 Avraham & Yuracko, *supra* note 2.

101 *Id*.

reduce not only the private costs but also the social costs of the activity of the tortfeasor.

Looking at the same issue from another perspective, targeting receives support from the law and economics because if blended tables were adopted, tort law could provide distorted price signals to tortfeasors regarding the amount to be invested in precautionary measures.[102] This would occur if the optimal amount of precautions that a tortfeasor should take was determined on the basis of how much a victim would be willing to pay to avoid being exposed to the risk of suffering the loss. Notice that in law and economics this is a very common way of determining the optimal investments of tortfeasors, as it is often held that investments in precautions should be tailored to reductions in expected losses.[103]

If the WTP of a victim is accepted as the preferable way of establishing care investments of tortfeasors, the use of blended tables may provide distorted incentives by decreasing tortfeasors' ability to discern between the WTP of different victims. In fact, the WTP to avoid injuries or death is generally positively correlated with the wealth of the individual. This is due to the strict constraints that relatively less wealthy people have in terms of their spending capacity and, maybe, to the expected higher losses in future earning capacity that high-income earners face.[104] When damage awards do not distinguish between the WTP of the victims, tortfeasors will be incentivized to invest to an excessive (too little) extent in precautionary measures to avoid harming the less (more) wealthy. One could argue that this argument does not apply here because statistical tables capture income instead of wealth gaps. However, while the WTP of victims is more related to their wealth than to their income,[105] since income and wealth are often strongly correlated, the argument is still relevant. Notice also that this issue is not solved completely by the use of gender/race-based statistical tables, as relying on them can at best make the determination of damages closer to the average of each group considered. Thus, to the extent that groups are not completely homogeneous and tortfeasors are not able to target victims if not on the basis of group, some over/under-investment will take place. Based on these arguments, conventional law and economics indeed favor targeting.[106] Avraham has recently proposed several arguments on the basis of which targeting may not be efficient.[107] The next section will briefly review these arguments which represent the basis of the behavioral analysis that follows.

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102 *Id.*

103 Porat, *supra* note 18, at 100-101.

104 Avraham & Yuracko, *supra* note 2.

105 Porat, *supra* note 18, at 100-101.

106 Avraham & Yuracko, *supra* note 2, at 699.

107 *Id*. at 700-717.

B. Welfarist Arguments Against Non-Blended Tables

A recent article by Avraham and Yuracko, has put forward a powerful critique of the conventional law and economics view regarding the use of non-blended tables.[108] This critique is built upon four main arguments that will be reviewed. The first argument proposed by Avraham and Yuracko relates to the inaccuracy of non-blended tables. Due to this inaccuracy, the use of non-blended tables might result in less accurate determination of damages than the use of blended ones.[109] This argument is based on two main observations. First, tables of this type can in fact only capture a snapshot of reality, and are thus unable to take into account the dynamic aspects of gender and racial groups socioeconomic status. In particular, they do not consider trends showing improvements in the socioeconomic conditions of females and racial minorities that have taken place in the recent past. For instance, these tables do not capture the advancements that, thanks to better educational achievements, young women have achieved in the labor market of several U.S. metropolitan cities.[110] The inability of these tables to capture dynamic trends, is manifest in their imprecision in forecasting future dynamics of racial group measures of socioeconomic status.[111] For instance, according to the projections released in 1995 by the Census Bureau, the life expectancy at birth of a Black male in 2015 was expected to be 62.5 years.[112] If we look at the actual life expectancy at birth of a Black man in 2014 it was 72.5.[113] Thus projections made about 20 years ago underestimated the 2015 life expectancy of Black males by 10 years. Conversely, for White males the underestimation was only 4 years,[114] indicating that these tables failed to capture the improvements that Black males would have achieved in the period considered. Notice that forecasted measures are based on past trends.[115] Thus, given the observed discrepancy between forecasted at actual values, this indicates that these tables are not particularly accurate in capturing dynamic trends. Notice

108 *Id*. at 701.

109 *Id*. at 702

110 *Id*. at 703.

111 For a method to forecast the socioeconomic status of racial groups, *see* Dominioni, *supra* note 11, at 1-28.

112 *See* U.S. Bureau of the Census, *Current Population Reports, Population Projections of the United States by Age, Sex, Race, and Hispanic Origin: 1995 to 2050*, 2 (1995), https://www.census.gov/prod/1/pop/p25-1130/p251130.pdf.

113 U.S. Department of Health and Human Services, Health, United States, 2015, *With Special Feature on Racial and Ethnic Health Disparities,* Table 15, 53 (2015), https://www.cdc.gov/nchs/data/hus/hus15.pdf.

114 *Compare* U.S. Bureau of the Census, *supra* note 112 *with* U.S. Department of Health and Human Services, *Health, United States, 2015, With Special Feature on Racial and Ethnic Health Disparities*, Table 15, (2015), https://www.cdc.gov/nchs/data/hus/hus15.pdf.

115 U.S. Bureau of the Census, *supra* note 112.

also that similar issues arise when focusing on gender gaps. For instance, statistical tables report that females tend to earn considerably less than males of the same age. However, several studies have shown that the gender income gap is narrowing in many industries as females are improving their job market positioning.[116]

The overall conclusion is that non-blended tables are likely to lead to systematic underestimations of the damages awarded to females and minority members. In this regard, as mentioned above, the economics of tort law highlights that systematic underestimations of damages awarded can lead tortfeasors to underinvest in precautionary measures and engage too much in the potentially tortious activity to the detriment of social welfare.[117]

Second, according to Avraham and Yuracko, the inherently lower accuracy of non-blended tables could be linked to the way these tables are built and used. In particular, they notice that by reporting means, these tables fail to account for the (often high) variability of these measures.[118] In this connection, a clear example of a minority population that is often treated as a single group but that has a strong variability in terms of the socioeconomic status of its members are Asians in the U.S. population. This "homogeneous" racial group is in fact composed of different sub-ethnic groups, some of which score better than Whites on several dimensions of socioeconomic status, while others are in more precarious conditions than the average Black person.[119] Avraham and Yuracko argue that using blended tables may decrease the variance in damages awarded as they are built upon a larger number of observations than non-blended ones. This, in turn, can be social welfare enhancing, when it leads to a large number of victims to be miscompensated by a little, than when it leads to a smaller amount of larger miscompensations.[120] This is because risk averse individuals, i.e. individuals that do not like having to bear a pure financial risk,[121] often prefer suffering a smaller loss than having a small chance to suffer a large one.[122] Yet, whether increasing the number of observations necessarily leads to lower the variance in damages

116 *See*, for instance, Laura Cox Kaplan, *How Young Women Are Changing the Workplace*, WORLD ECONOMIC FORUM, (Oct. 29, 2014), https://www.weforum.org/agenda/2014/10/millennial-women-changing-workplace/; *see also* Cate Doty, *Addressing the Gender Gap in College Aspirations*, N.Y. TIMES (Oct. 23, 2009), https://thechoice.blogs.nytimes.com/2009/10/23/addressing-the-gender-gap-in-colleges/; *see also* Avraham & Yuracko, *supra* note 2, at 702.

117 *See supra* Introduction; *see also* Avraham & Yuracko, *supra* note 2, at 702.

118 *See* Avraham & Yuracko, *supra* note 2, at 704.

119 Arthur Sakamoto, Kimberly Goyette, ChangHwan Kim, *Socioeconomic Attainments of Asian Americans*, 35 ANNUAL REVIEW OF SOCIOLOGY 255, 255-257 (Aug. 11, 2009).

120 Avraham & Yuracko, *supra* note 2, at 705.

121 On risk aversion *see* Shavell, *supra* note 26, 258.

122 *See* Avraham & Yuracko, *supra* note 2, at 705.

awarded is however not mathematically guaranteed.[123] As such, the argument is not very powerful.

Similarly, the use of means, which are particularly sensitive to outliers, may fail to capture skewed distributions in measures of socioeconomic status across racial and gender groups. This, according to Avraham and Yuracko, can be problematic because if the distribution of the socioeconomic measure considered is positively skewed for the relatively better-positioned group and the opposite is true for the disadvantaged group, it can be that statistically significant differences between the means of the two distributions are not mirrored in statistically significant differences between modes and medians.[124] This suggests that the use of means might be less justified than previously thought. This is particularly true in the context of tort law, where the courts apply a more likely than not standard to reduce errors in adjudication.[125] They therefore, suggest using modes or medians as alternative measures. [126] In a nutshell, Avraham and Yuracko's first argument is that the use of non-blended tables may lead to unwarranted targeting, i.e. to targeting that is not justified on the basis of the actual social costs of the activity of the tortfeasor.

A second argument put forward by Avraham and Yuracko relates to the dynamics that lead to gaps in socioeconomic status between the considered groups.[127] In particular, they argue that the lower socioeconomic standing of minorities and women in society is a result of market failures.[128] For instance, they highlight that employers perceive lower job attachment by female and minority members, and thus offer jobs that take less into account the needs of these segments of the population.[129] As a consequence, job attachment of women and minority members may be further eroded. To the extent that employers' perceptions do not reflect innate preferences of females (which may on average have a stronger preference to be directly involved in child raising) and minority members, this labor discrimination is inefficient.[130] The result of this vicious circle, when mirrored in damages awards may provide an ex-ante incentive to members of minority groups and females to reduce investments in human capital. This, according to Avraham and Yuracko could be inefficient, as it may lead a potentially productive member of society to underinvest in productive skills.[131] However, while

123 *Id*. at 705.
124 *Id*. at 705-706.
125 *Id*. at 706.
126 *Id*.
127 *Id*. at 707.
128 *Id*.
129 *Id*.
130 *Id*.
131 *Id*. at 708.

these incentives might well be present, they are unlikely to be particularly strong. Indeed, as Avraham and Yuracko themselves recognize, it is hard to believe that the use of non-blended tables may induce members of discriminated groups or their agents (e.g. parents towards children) to underinvest in productive skills.[132] The argument, while logically strong, remains weak.[133]

Third, in Avraham and Yuracko's view, it is ethically inappropriate to consider the WTP of victims to reduce the expected losses from accidents.[134] Recently, law and economics scholars have put forward various arguments against the use of WTP to establish amounts that victims are willing to invest to reduce expected losses.[135] As noted above, the WTP of a person is largely determined by her wealth. In this connection, the wealthy person's WTP will be higher than the one of a less wealthy person, partially because the former has a greater possibility to spend her (greater) wealth in activities from which she derives utility. Porat and Tabbach have recently shown that efficiency does not require considering the increase in WTP linked to the desire to spend wealth when setting damages.[136] This is because wealth is an inherently transferable good and the law should not be concerned with who enjoys it, but only about its production.[137] Avraham and Yuracko go further than this. In their perspective, for ethical reasons differences in human capital, linked to belonging to a certain racial or gender group, should not be taken into account when establishing damages awards.[138]

The last argument proposed by Avraham and Yuracko is linked to trade-offs between efficiency and fairness.[139] In particular, they identify three arguments on the basis of which efficiency should not be the only criterion for the establishment of damages. First, as most people value fairness, one could think giving fairness lexical priority in the social welfare function is an argument.[140] The problem with this argument is that some people would not agree with always giving lexical priority to fairness over efficiency.[141] Second, rule utilitarianism may dictate avoiding targeting even if in some circumstances it would be better not doing so.[142] According to rule utilitarianism, it is better to follow rules

132 *Id*.
133 *Id*.
134 *Id*. at 709.
135 Ariel Porat & Avraham Tabbach, *Willingness to Pay, Death, Wealth, and Damages*, 13 AM. L. & ECON. REV. 45, 45 (2011).
136 *Id*.
137 *Id*.
138 Avraham & Yuracko, *supra* note 2, at 709.
139 *Id*. at 710.
140 *Id*. at 711.
141 *Id*.
142 *Id*.

that generally lead to higher social welfare than to try to establish in each single occasion which of a set of actions will lead to the highest social welfare. In this view, avoiding targeting might generally lead to higher social welfare if, for instance, this practice could undermine social cohesion.[143] Yet, the rule utilitarianism argument is limited in two ways:[144] first, whether avoiding targeting generally leads to higher social welfare is an empirical question. Rule utilitarianism may actually target at disadvantaged individuals (for instance, if indeed their contribution to society is extremely limited). Second, contrary to traditional law and economic wisdom, sometimes it might be better to address inequalities via private law than via the tax and transfer system.[145] For instance, this is the case when relying on the former is more expensive than acting via tax law. Yet, as Avraham and Yuracko themselves recognize, this is unlikely to be the case with regards to the choice between employing blended and non-blended tables.[146] Indeed, both types of tables are freely available, thus, not costly to adopt for the establishment of damages.

In sum, existing literature has so far highlighted various arguments according to which law and economics should not support the use of non-blended tables. Yet, as recognized by the same literature, none of these arguments is necessarily fatal to the traditional view according to which the use of blended tables is unwarranted.

V. BLENDED VS NON-BLENDED TABLES

In the following I elaborate on the ideas put forward by Avraham and Yuracko and show that some of the arguments they propose are stronger when the neoclassical analysis is complemented with a behaviorally informed one. In particular, I will draw insights from studies on the outgroup homogeneity bias, willingness to accept (WTA), willingness to pay (WTP), gap and anchoring.

A. Outgroup Homogeneity Bias and Non-Blended Tables

As discussed in the previous section, one of the reasons why the use of non-blended tables may decrease the efficiency of tort law systems compared to blended tables is that the former might be less accurate as they may fail to capture the variability of socioeconomic indicators within different racial groups. While it is certainly true that these tables do not

143 *Id*. at 713.
144 *Id*.
145 *Id*. at 715.
146 *Id*. at 700.

report the variance of the measures, the main weakness of this argument is that the same holds for blended tables. Consequently, it is impossible from a theoretical perspective to know which type of table will generally lead to a higher underestimation of the variance in the measure considered. The main contention of this section is that behavioral economics support the idea that the use of non-blended tables is likely to ease the systematic underestimation of the variance within the racial/gender group that is the least represented in the judiciary. In addition, I will argue that this systematic underestimation may lead to decreases in social welfare. The arguments proposed here are based on studies on the outgroup homogeneity bias. I will start by briefly introducing this bias. Subsequently, I will apply these insights to the use of tables in tort trials.

The outgroup homogeneity bias refers to the phenomenon by which individuals tend to perceive the members of groups with which they do not identify as being: i) more homogeneous than they really are; ii) more homogeneous than the group to which the individual belongs.[147] Given that in the present section I focus mainly on accuracy, in the following sections I will refer to the effect of this bias only in terms of the first effect described above.

In the context of this strand of literature, a group can be any type of group, from groups artificially created in the lab (e.g. individuals wearing blue or red t-shirts) to social groups, such as gender, ethnicity or race.[148] Existing research indicates that this phenomenon is robust and that the strength of this bias depends on various factors.[149] For instance, the size of the outgroup moderates bias. In particular, ceteris paribus, the larger the size of the outgroup, the larger the bias. In addition, the bias is moderated by the actual variability of the outgroup. The less the actual variability, the smaller the bias. Similarly, the perceived homogeneity of groups is stronger when the evaluation is carried out on the basis of a stereotypical trait.[150] Last, but not least, bias seems to be generally stronger when the observer's socioeconomic status is higher than the one

147 Charles M. Judd, Bernadette Park, Vincent Yzerbyt, Ernestine H. Gordijn & Dominique Muller, *Attributions of Intergroup Bias and Outgroup Homogeneity to Ingroup and Outgroup Others*, 35 EUR. J. SOC. PSYCHOL. 677 (2005).

148 Alberto Voci, *Perceived Group Variability and the Salience of Personal and Social Identity*, 11 EUR. R. OF SOC. PSYCHOL. 177 (2000); Mark Rubin, Miles Hewstone, & Alberto Voci, *Stretching the Boundaries: Strategic Perceptions of Intragroup Variability*. 31 Eur. J. of Soc. Psychol. 413 (2001).

149 Jennifer G. Boldry, Lowell Gaertner, Jeff Quinn, *Measuring the Measures a Meta-Analytic Investigation of the Measures of Outgroup Homogeneity*, 10 Group Processes & Intergroup Rel. 157, 157 (2007).

150 Mark Rubin & Constantina Badea, *They're All the Same!. . . but for Several Different Reasons: A Review of the Multicausal Nature of Perceived Group Variability*, 21 Current Directions in Psychol. Sci. 367, 367 (2012).

of the outgroup members'.[151] More importantly, it has been shown that a social status effect also takes place in the context of evaluating the heterogeneity of racial minorities.[152]

The outgroup homogeneity bias has been shown to have a strict and self-reinforcing link with the behavior of the observer. In particular, building on existing psychological evidence, Alter and Darley have shown that the perceived homogeneity of a group is positively related to collective treatment of the group.[153] In other words, the more we perceive a group to be homogeneous, the more we tend to behave uniformly towards the individuals belonging to this group.[154] Importantly, this effect has been shown with regards to the allocation of punishment and rewards.[155] In turn, the collective treatment of the group reinforces the perceived homogeneity of the group, potentially leading to a vicious circle.[156] In this connection, various strands of research indicate that perceived group homogeneity fosters higher punishments for actions (e.g. crimes) committed by individuals belonging to that group.[157]

When applied to the use of statistical tables in the context of tort law, the literature on outgroup homogeneity bias suggests that adjudicators may have a systematically biased perception of the variability of outgroup members in terms of the measures captured by the tables. In fact, psychological research indicates that outgroup homogeneity bias is triggered in situations where the personal identity of the target individual (in a tort law case, the victim) is made salient in a subtle way.[158] Indeed, the use of non-blended tables enhances in a subtle way the saliency of the racial/gender group to which the victim belongs, and thus potentially triggers the bias. In legal systems in which courts have (and make use of their) discretion to adapt damage awards depending on the specific circumstances of the case, the use of non-blended tables may therefore lead to systematic biases in the estimation of damages across groups of victims. To illustrate, imagine a society composed of two groups (X;Y). A judge that belongs to group X is called to award damages for loss of future earning capacity of a victim of a tort. If damages are established on the basis of blended tables, the bias is not triggered. This applies especially in all those cases in which the race of the victims would remain

151 *Id*. at 369.

152 *Id*.

153 Adam L. Alter & John M. Darley, *When the Association Between Appearance and Outcome Contaminates Social Judgment: a Bidirectional Model Linking Group Homogeneity and Collective Treatment*, 97, J. OF PERS. AND SOC. PSYCHOL. 776, 776 (2009).

154 *Id*. at 791

155 *Id*. at 776.

156 *Id*.

157 Anna-Kaisa Newheiser, Takuya Sawaoka, & John F. Dovidio, *Why Do We Punish Groups? High Entitativity Promotes Moral Suspicion*, 48, J. of Experimental Soc. Psychol. 931 (2012).

158 Voci, *supra* note 148, at 211-12.

otherwise unknown to the judge, such as proceedings in which parties do not appear in front of the court. Conversely, the use of non-blended tables will trigger the bias, thus, lead to forecast future losses for members of the group Y without taking into account the actual variability within this group. Notice that this could repeatedly occur in the establishment of damages, making it a non-trivial issue. For instance, the bias could be triggered both when the damage is calculated on the basis of these tables and subsequently when it is adapted to the specific circumstance of the victim (e.g. considering gender/race-based relative mortality ratios based on smoking habits).

The degree by which the underestimation of the variability of the losses suffered by individuals belonging to a certain racial or gender group occurs depends on the demographic composition of the judiciary within a legal system. Judiciaries in the Western world are predominantly composed of White individuals.[159] This seems to be particularly true for European judiciaries.[160] This suggests that it is the variance of the losses suffered by members of racial minority groups that are more likely to be systematically miss-estimated. The fact that outgroup homogeneity bias is particularly strong towards minorities and given the self-reinforcing effect of collective treatment, it is plausible that this effect is not negligible.

Shifting our attention towards gender groups, here the bias is likely to be less systematic in several legal systems. In fact, in many Western judiciaries, gender gap is not large. Sometimes women are the majority of judges sitting in lower courts.[161] Yet, this only implies that the underestimation of the variability of the socioeconomic measure considered will occur for both groups, just in a less systematic manner.

What are the welfare effects of the use of non-blended tables? Generally, from a law and economics perspective damages awards should be set equal to the actual harm suffered by victims.[162] Yet, for optimal prevention to take place what matters is only average accuracy.[163]

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159 The proportion of racial minority judges and female judges in the U.S. varies across states, indicating that the outgroup homogeneity bias is likely to be more of a problem in some state than in others. For instance, in 2008 there were no judges that belonged to a racial minority in the state courts of six U.S. states (Maine, Montana, New Hampshire, South Dakota, Vermont, and Wyoming), while in New York the percentage of minority judges was 20.5%. *See* Malia Reddick, Michael J. Nelson, and Rachel Paine Caufield, *Racial and Gender Diversity on State Courts*, 48 The Judges' J. 1, 1-3 (2009).

160 *See*, for instance, a study conducted on behalf of the Dutch judiciary, indicating that judges with non-European ancestry are very few. Anita Böcker & Leny de Groot-van Leeuwen, *Ethnic Minorities Representation in the Judiciary: Diversity among Judges in Old and New Countries of Immigration*, The Judiciary. Q. 1, 47 (2007).

161 VINCENZO FERRARI, DIRITTO E SOCIETA: ELEMENTI DI SOCIOLOGIA DEL DIRITTO (2006).

162 Louis Kaplow & Steven Shavell, *Accuracy in the Assessment of Damages*, 39 J. of L. & Econ. 191, 192 (1996).

163 *Id*.

Changes in the perceived variability of the harm suffered by outgroup members do not necessarily lead to changes in the perceived average harm inflicted to this group. In this sense, the outgroup homogeneity bias may not have welfare implications. Nonetheless, recent law and economics scholarship has highlighted that the homogeneity bias can sometimes lead to decreases in social welfare.[164] In particular, this occurs when courts impose liability under a negligence rule in a situation in which multiple victims are involved.[165] For instance, imagine that a court has to establish whether to make a tortfeasor (A) liable for some losses suffered by B and C.[166] The expected harm suffered by B and C is respectively 60 and 10.[167] While their cost of precautions is 30 and 50 respectively.[168] If the precautionary costs of the tortfeasor were 50 and the judge does not distinguish the different losses/costs sustained by single victims, A would be made liable. Indeed, she could have avoided a loss of 70 by investing 50.[169] However, the opposite result would be obtained if judges were able to distinguish the specific situation of each victim.[170] In this scenario, B would invest 30 to avoid the loss of 50, while C would prefer to bear the loss of 10.[171] In this situation the total cost of the accident is 40, which is lower than the one we would have if A was made liable.[172] The use of non-blended tables may, therefore, lead to decreases in social welfare. Since the bias would be triggered less frequently if blended tables were used, this negative welfare consequence of adjudication would be a less compelling problem.

To sum up, this section has argued that the employment of non-blended tables may trigger the outgroup homogeneity bias. In turn, this bias may decrease the efficiency of tort law systems by exposing tortfeasors to either a too high or a too low expected liability.

B. WTA-WTP Gap and Non-Blended Tables

As mentioned above, the third critique moved by Avraham and Yuracko to the employment of non-blended tables relates directly to the use of peoples' WTP for establishing the right amount of safety measures to be taken. While Avraham's argument is mainly grounded in non-welfarist considerations, the present section argues that behavioral

164 Halbersberg & Guttel, *supra* note 24, 430-32.
165 *Id*.
166 *See id*.
167 *Id*.
168 *Id*.
169 *Id*.
170 *Id*.
171 *Id*.
172 *Id*.

economics provides arguments in favor of using the WTA measure. This, in turn, strengthens the case for the use of blended tables.

In principle, the evaluation of positive and negative changes in welfare linked to the consequence of an action (e.g. investing in safety measures) could be conducted on the basis of the WTP or the WTA of the individuals involved. Standard economic theory employs WTP under the assumption that the two measures provide very similar values (net of the potential effect of income and wealth).[173] A number of studies have shown that this assumption often does not correspond to reality. Indeed, a substantial amount of research in psychology and behavioral economics has identified systematic divergences between the two measures, with WTA being much larger than WTP.[174] An earlier review found that WTA/WTP ratio to be 7.17 and a more recent one 3.28.[175] Scholars interested in cost-benefit analysis have long discussed the implications of the choice of the best measure to be used in cost-benefit analysis.[176] While consensus is far from being reached,[177] the practice of evaluating policies solely on the basis of WTP is not anymore an obvious choice. Of particular interest for the present article is that research on the WTA/WTP gap highlights that gains and losses are often not evaluated in absolute terms, but in terms of variations that occur starting from a reference point (for instance, but not necessarily, the status quo).[178] As explained by Knetsch, this reference dependence implies that positive changes can be either gains (in the domain of gains, meaning when there is a potential welfare improvement compared to the status quo) or reductions of losses (if the domain is that of losses, i.e. when there is a potential reduction in welfare compared to the reference point). Conversely, a negative change is either a foregone gain (in the domain of gains) or a loss (in the domain of losses).[179] According to Knetsch, WTA is the most appropriate measure to evaluate reductions in losses and the WTP is the most suitable to measure foregone gains.[180] This is because these two measures are those that would bring the victim to the same situation in which she was before the accident.[181] Notice that also this firm view does not provide a

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173 Jack L. Knetsch, *The Curiously Continuing Saga of Choosing the Measure of Welfare Changes*, 6 J. BENEFIT COST ANALYSIS 217, 217-18 (2015).

174 *See* John K. Horowitz & Kenneth E. McConnell, *A Review of WTA/WTP Studies*, 44 J. ENVTL. ECON. & MGMT. 426, 426-28 (2002); Tuba Tunçela & James K. Hammitt, *A New Meta-analysis on the WTP/WTA Disparity*, 68 J. ENVTL. ECON. & MGMT. 175, 175-76 (2014).

175 Horowitz & McConnell, *supra* note 174, at 433; Tunçela & Hammitt, *supra* note 174, at 181.

176 *Compare* Knetsch*, supra* note 173, at 217-18; *and* Thomas J. Kniesner, et al, *Willingness to Accept Equals Willingness to Pay for Labor Market Estimates of the Value of a Statistical Life*, 48 J. RISK & UNCERTAINTY 187 (2014).

177 Knetsch, *supra* note 173, at 217-18.

178 *Id*. at 218.

179 *Id*.

180 *Id*.

181 *Id*.

clear answer to whether optimal care in a tort law context should be determined considering victims' WTA or WTP. In fact, it is not clear, for instance, whether victims perceive a loss in earning capacity as a forgone gain or a loss (that could be reduced). Yet, this literature is relevant for the present discussion because it weakens the case for the use of WTP in tort law contexts and provides an alternative measure that could be used instead. Notice that if WTA is adopted, tortfeasors would be generally required to take more precautionary measures and/or decrease more of their activity level compared to a state of the world in which cost-benefit analysis is based on WTP. Thus, it is possible that in the current state of affairs the social cost of several human activities is too high.

In addition, a major difference between WTP and WTA is that the latter is not constrained by wealth. For this reason, when compared with WTP, WTA is more likely to vary less across individuals with different levels of wealth.[182] As a consequence, using WTA instead of WTP is often seen as a practice that would lead to a more equitable distribution of hazards.[183] As highlighted above, a more equal distribution of tort losses across racial and gender groups would be achieved if damages were calculated using blended tables than otherwise. In this sense, the employment of blended tables may better approximate the result that would be achieved had WTA been adopted. Indeed, under both regimes (blended tables and WTA), the distribution of losses across social groups would be more homogeneous than if non-blended tables or WTP were employed. Whether this is in fact the case is an empirical question which the present article cannot answer. Yet, once this possibility is considered, it is not any more obvious that the employment of non-blended tables will necessarily lead to welfare improvements compared to the use of blended ones. In particular, this would depend on whether: (i) WTA is a better measure for the cost-benefit analysis in the realm of tort law; (ii) which type of tables better approximate WTA.

In addition, since the employment of blended tables would reduce the burden suffered by members of disadvantaged groups, their use may lead to better spreading of losses. Loss spreading is widely recognized as the secondary goal of tort law,[184] and refers to the optimal allocation of the risk of losses given the risks preferences of victims and tortfeasors.[185] Generally, loss spreading leads to higher levels of social utility when risk-averse individuals bear lower expected losses.[186] For a risk-averse

182 William S. Breffle, et al, *Understanding How Income Influences Willingness to Pay for Joint Programs: A More Equitable Value Measure for the Less Wealthy*, 109 ECOLOGICAL ECON. 17, 17-18 (2015).

183 *Id*. at 19.

184 Calabresi, *supra* note 100, 36.

185 Shavell, *supra* note 26, Chapter 5, 1-2.

186 As mentioned above, risk-averse individuals are those that dislike being exposed to pure financial risk.

individual (as most humans are), the marginal utility of money decreases for any increase in wealth.[187] This is because the reduction in utility that derives from a certain financial loss is greater than the increase in utility that follows a gain of an equal amount.[188]

It is generally agreed in the literature that the decrease in utility due to a loss that risk-averse individuals experience is positively correlated with the size of the loss relative to the personal wealth. In other words, the larger the loss relative to the assets of a risk-averse person, the greater the decrease in utility suffered.[189] For this reason, a redistribution of expected losses from the less privileged to the most affluent members of a society, as would happen if blended tables were used instead of non-blended ones, may sometimes increase social welfare.

To sum up, in this section I have argued that the literature on the WTP/WTA gap supports the employment of blended tables in three ways: (1) it generally weakens the case for the use of WTP measures in tort law; (2) to the extent that WTA has to be considered the right measure, it is not clear anymore whether non-blended tables are superior to blended ones in terms of social welfare maximization. The fact that the employment of WTA leads to more equitable distribution of losses across social groups suggests that the use of blended tables may better approximate the result that would be obtained if WTA was used as a measure; (3) when read in conjunction with the literature on loss spreading, it seems that the use of blended tables may also generate welfare benefits by leading to a more equitable redistribution of losses.

C. Anchoring and Non-Blended Tables

In the previous section, I have highlighted how the group homogeneity bias and the WTA-WTP gap can support the claim that blended tables are indeed more appropriate to establish damages in tort trials. In this section, I expand the behavioural-informed analysis of the employment of non-blended tables in tort trials by looking at a widely studied phenomenon: anchoring and adjustment. I argue that, given the existence of this phenomenon, the use of non-blended tables is even less warranted than otherwise.

Anchoring and adjustment refers to the phenomenon by which individuals make evaluations that are biased by irrelevant information (the anchor).[190] For instance, in a classical experiment on anchoring and adjustment, individuals provided systematically different estimates of the

187 *Id*.
188 Shavell, *supra* note 26, 258.
189 *Id*.
190 Tversky & Kahneman, *supra* note 25, at 1128.

percentage of African countries that are part of the United Nations depending on whether they were previously exposed to one of two numbers that were manifestly irrelevant for the completion of the task.[191] Research indicates that this phenomenon is due to the fact that individuals' judgement is initially affected by the anchor and the following adjustment (which is logically warranted given the irrelevance of the information) is not sufficient to avoid the contamination.[192]

Legal scholarship is familiar with the existence of this bias.[193] Indeed, this bias has been replicated with U.S. and EU judges.[194] In addition, this effect has been found both with regards to numeric judgments as well as concerning judgments of ambiguous legal standards.[195] This phenomenon is therefore of clear relevance for the study of judicial decision-making. In the context of the present article, anchoring is a relevant phenomenon because statistical tables can provide an anchor for the establishment of other typologies of damages and spread even further inequalities in awards between social groups.

Legal systems provide different taxonomies of damages. As illustrated in Parts II and III, depending on the country considered, gender and race-based tables are used to calculate one or more types of damages, but not others. For instance, as illustrated above, under English, French, Italian, and U.S. law statistical tables are used for determining the losses of future earning capacity. In this context, their use might be warranted because work life expectancy is indeed a relevant factor to establish the likely amount that the subject would have earned had the accident not occurred. Yet, imagine if the estimation of these losses would provide an anchor for the determination of economic damages that the victim had to bear as a consequence of the accident. This could occur, for instance, with regards to goods for which the market value does not correspond to a specific sum a judge can reference, but to a range from which the judge, with some discretion, picks a number. This occurs, for instance, when economic damages are established in the abstract. An example of a determination of damages at an abstract level is material harm to cars.[196] Here, for instance, the damage is assessed by considering the cost that a mechanic would charge to repair the car, regardless of whether the

191 *Id*.

192 *Id*.

193 *See*, for instance, Yuval Feldman, et al., *Anchoring Legal Standards*, 13(2) J. OF EMPIRICAL LEGAL STUDIES 298 (2016).

194 Chris Guthrie et al. *Inside the Judicial Mind*, 86 CORNELL L. REV. 777, 792 (2000); Jeffrey J. Rachlinski et al. *Can Judges Make Reliable Numeric Judgments: Distorted Damages and Skewed Sentences*, 90 IND. L. J. 695, 730 (2015).

195 Feldman, Y., et al. *Anchoring Legal Standards*, 13(2) J. OF EMPIRICAL LEGAL STUDIES 298, 302 (2016).

196 Michael Faure & Louis Visscher, *The Role of Experts in Assessing Damages–A Law and Economics Account*, 2 EUR. J. RISK REG. 376, 379-80 (2011).

reparation actually takes place.[197] Notice that many goods belong to this category, as there is no exact market value with regards to houses, used cars (by definition any car that circulates is a used one), and data stored in hardware, for instance. For damages aimed at compensating these types of losses, the influence of the tables has a less obvious justification.

How is this discussion related to the use of (non-)blended tables? The starting point of the analysis is that regardless of whether one uses blended or non-blended tables, anchoring can affect the decision of the judge.[198] However, the effect of the anchor is likely to be different depending on the type of table used. In fact, contrary to blended tables, non-blended ones are likely to provide different anchors and therefore lead to different estimation of damages across racial and gender groups. In particular, social groups that are disadvantaged by the employment of these tables will be further penalized by the bias, since their damages awards for type of damages unrelated to socioeconomic status would be relatively lower than those of non-disadvantaged individuals. This can spread social inequalities beyond what is warranted by the conventional law and economics view of the use of statistical tables. In fact, the lower anchors provided by the tables for victims who are members of disadvantaged racial and gender groups might bias the estimation of the other types of damages downwards compared to the anchor provided by members of advantaged groups. This type of disparity in damage awards would not occur if blended tables provide the anchor.

What are the potential welfare effects of the use of non-blended tables? As argued above, when courts establish damages on the basis of non-blended tables, anchoring has the effect of redistributing resources from disadvantaged groups towards advantaged ones. This redistribution would occur beyond what standard law and economic analysis suggests. Because of this redistribution, anchoring makes it unclear which policy regime (blended vs. non-blended tables approach) would benefit social welfare more. The answer to this question remains an empirical one, which goes beyond the aim of the present article. The following are two theoretical arguments that suggest that social welfare is likely to be higher in the presence of anchoring if blended tables are used.

The first argument relates to loss spreading. As discussed above, loss spreading suggests exercising care in setting up a tort law system that redirects expected losses from relatively wealthy individuals to the relatively disadvantaged ones. An anchor-based on blended tables does not disfavor any of the social groups, while anchoring relative to non-blended tables further increase losses suffered by members of

197 *Id*.

198 Notice that effect of anchoring may also change the expectations of the victim. However, since I focus on unilateral accidents here, the attention is on the decision of the judge and the incentives to tortfeasors.

economically disadvantaged groups. Because of this, when anchoring is considered, non-blended tables may lead to lower social welfare states compared to blended ones.

The starting point of the second argument is that neoclassical economics is not per se against policies that increase equality. As long as members of a society have a preference for fairness, mainstream law and economics accept the incorporation of distributive justice concerns into the social welfare function.[199] As noted by Avraham, this fact provides an argument in favor of the use of blended tables, but only under the condition that in this society there is a sufficient number of individuals that are neither sexists nor racists, or believe that welfare maximization always trumps inequality regardless of whether this inequality is a product of discrimination.[200] Starting from these premises, literature on anchoring overcomes the limit highlighted by Avraham.

As discussed above, in presence of anchoring, it is unclear which of the two policy choices would yield higher social welfare, even though the loss-spreading argument points in favor of the use of blended tables. Because of this, a strict welfarist cannot have strong preferences in favor of one of the two options. Thus, the chances that a society would support the use of non-blended tables is much smaller in presence of anchoring than otherwise. This possibility is further reduced when one considers a person could support the use of blended tables only when his or her preferences are sufficiently strong, that s/he would prefer a legal system that worsens the position of minority groups and women to an extent that has no connection with any logical argument. The effect of anchoring on the determination of damages for which tables should not be used is foreign to any logic (e.g. for material harm to cars), as explained above. This, in turn, may further reduce the strength of the argument against the use of blended tables.

In a nutshell, the effect of anchoring on the determination of damages is likely to foster social inequalities to an extent that is not justified from a logical or welfarist perspective. In addition, it is likely to increase the losses suffered by members of disadvantaged groups, thus leading to less efficient loss spreading. Furthermore, the illogic and potentially welfare-decreasing effect of anchoring should reduce the support that blended tables can find in a given society. To the extent that individual preferences for fairness should be considered in the welfare function of a society, the standard law and economics argument against the use of blended tables is less tenable than usually assumed.

This Part has taken a behavioral approach to the study of the welfare

199 Louis Kaplow & Steven Shavell, *Fairness Versus Welfare: Notes on the Pareto Principles, Preferences, and Distributive Justice*, 32 J. OF LEGAL STUDIES 331, 333 (2003).

200 Avraham & Yuracko, *supra* note 2, at 661, 668.

effects related to the employment of (non-)blended tables in tort trials. Overall, the analysis has shown that various strands of literature suggest that the employment of non-blended tables compared to the use of blended ones may lead to decreases in social welfare. Therefore, the welfarist case for the use of non-blended tables is much weaker than usually assumed in law and economics. This analysis complements and supports the recent claim put forward by Avraham and Yuracko that the use of non-blended tables in tort trials is unfair and inefficient. In the remainder of this article I elaborate on how to address these concerns.

VI. NORMATIVE IMPLICATIONS

There is much evidence in favor of the policy choice to abandon the use of gender and race-based statistical tables to award damages in tort trials in favor of an approach that does not lead to disparate damages awards across racial and gender groups. As discussed in Part II, England, France, and Italy apply different approaches to awarding damages for future losses, some of which (especially in France and Italy) lead, through different ways, to less discriminatory compensation between social groups. It goes well beyond the scope of the present article to analyze which of these non-discriminative approaches is generally preferable. My claim is more simply that damages should be awarded without considering differences between social groups that are captured in statistical tables.

Similarly, Avraham and Yuracko argue that non-blended tables should be abandoned in favor of blended ones.[201] In their view, while this approach would be best applied to all tort law cases, it would be more easily implementable with regards to children than with adults.[202] Restricting the use of blended tables to cases in which children are victims has two potential advantages. First, it would be a more moderate change for courts, which may make it more easily acceptable.[203] Second, it mitigates concerns related to moral hazard. Moral hazard concerns are that, for instance, less wealthy individuals might take less precautions hoping to receive damages awards for future losses of earning capacity that are higher than their expected future salary.[204] However, this argument is less likely to apply to children than to adults, because the former are less likely to engage in this type of monetary-driven strategic interactions.

In my view, there is no reason to limit the use of blended tables to

201 *Id*. at 669.
202 *Id*. at 661.
203 *Id*. at 678.
204 *Id*. at 709.

cases in which victims are children. In bodily injury and fatal accident cases, moral hazard is not a main problem. I believe that there are indeed very few people that would want to endure severe bodily injuries, for instance, the loss of a hand, in exchange damages that are higher than what they would have earned otherwise. This is evident in the French and the Italian experiences, in which, with some minor exceptions, damages are awarded regardless of gender and race.[205] It seems as though moral hazard due to the use of non-discriminatory methods to award damages has never been a policy issue in these two jurisdictions. Similarly, the significant differences in pain and suffering awards for personal injury cases across European countries are not seen as creating moral hazard concerns. [206] This happens despite the free circulation of EU citizens across European Union countries, which allows crossing borders easily, without even passing through customs. Lastly, it is important to stress that problems of moral hazard would be only slightly mitigated by the use of non-blended tables, because large differences in socioeconomic status exist also within racial and gender groups. Therefore, moral hazard could still be an issue even if non-blended tables were used. Black and White people that are less wealthy than the average person in their racial group may expect to earn more money if they fall victim of an accident than otherwise. Therefore, the distortive incentives for a Black person of moving from a state of the world in which non-blended tables are used to one in which courts use blended ones would be equal to the difference between the income of the average Black person and the income of the average White person.

Overall, even for adults, moral hazard concerns, due to the implementation of blended tables, if existent, are likely to be very modest. It is therefore well possible that the welfare gains from adopting blended tables exceed those of adopting non-blended ones even with regards to adults. The use of blended tables should be therefore extended to both children and adult cases.

VII. CONCLUSION

The U.S. courts' practice to employ gender and race-based statistical tables for the assessment of tort law damages has been heavily criticized in recent years. While earlier criticisms came mainly from the perspective of distributive justice, recent scholarship has argued that this practice

205 *See* above Part II.

206 Vaia Karapanou & Louis Visscher, *Towards a Better Assessment of Pain and Suffering Damages*, 1(1) J. OF EURO. TORT LAW 48, 64 (2010). For instance, according to this study, the highest amount awarded for pain and suffering in the Netherlands is about 333,000 euros, while in Italy it is more than three times larger (about 1,024,000 euros).

leads to lower welfare outcomes. This latter point is debated, however.

This article has built upon and expanded this literature from two perspectives. First, it analyzed whether similar practices take place under European tort law. More specifically, I have focused on three major European jurisdictions: England, France, and Italy. The analysis has shown that these European courts do not differentiate between racial groups in the employment of statistical tables. In addition, the role of gender is generally more limited in these three jurisdictions than in the U.S. This is especially true with regards to the French and the Italian legal system.

Second, as explicitly recognized by this literature, the welfarist case against the use of non-blended tables in tort trials has various weaknesses. This article has expanded the welfare analysis by taking a behavioral perspective on the issue. On this ground, it has been argued that the welfarist case for the use of non-blended tables is weaker than generally assumed.

Overall, this study suggests that the employment of non-blended tables in tort trials is likely to reduce social welfare. As such, even from a pure welfarist perspective, it should be abandoned in favor of blended tables. In this connection, the English, the French and the Italian practice seem to be more in line with this recommendation than the U.S. one. Ideally, the European experience can inspire U.S. courts to abandon the non-blended tables in favor of blended ones.