

Invisible Women – Exposing Data Bias in a World Designed for Men

Johanna Mehl | Book Review

In her award-winning book „Invisible Women“ Caroline Criado Perez shows, how the lack of data or the refusal to regard existing data on women’s bodies, environments, and occupations cause the perpetuation of a male bias, by using an impressive corpus of studies and data to expose the severity and ubiquity of its devastating consequences for women and society as a whole. As the subtitle accurately describes, Perez exposes what by its nature cannot be seen: a gap. By insistently pointing her finger to the empty spaces in patchy data that disregard female realities, she reminds the reader, that just because something can’t be seen, goes unnoticed or willingly disregarded, doesn’t mean it’s not there. The blindness to the need for sex-disaggregated data collection – and readers will most likely find themselves to have been blind to many of the presented examples of it – already describes one of the reasons the gender data gap exists in the first place, and why gap-riddled data can render the needs of half the world’s population invisible.

Perez bases her argumentation on the male-as-norm principle introduced by Simone de Beauvoir in her 1949 book *Second Sex*, while her own work primarily is an evidence-based exposure of its negative impacts on female lives, when mirrored in the data the world is increasingly reliant on. What translates to the default-male, male-as-otherwise, or the male bias is the equation of man and human, while females are

regarded as atypical, abnormal, mysterious, or a mutilated male – a principle inscribed „in our entire culture“ (preface), leaving „the stories we tell ourselves about our past, present and future“ (preface) conspicuous by the absence of women. „Invisible Women“ is a monumental collection of research on the failure to take female-specific concerns into consideration and at the same time makes it abundantly clear that „women lead different lives to men because of both their sex and their gender. They are treated differently. They experience the world differently, and this leads to different needs and different priorities“ (271).

One argument Perez uses to underline the importance of her studies, is that women make up 50% of the world’s population, rendering the gender data gap of course drastically unjust and unacceptable, but implying that the discrimination should primarily be addressed because it does not affect a minority. Even though black women are mentioned as being disadvantaged not only because of their gender, but also because of their race, the book doesn’t clearly address the intersectionality between gender and race, ethnicity, class, sexuality, and religion. Yet, neglecting third wave feminism concepts of intersection, non-binary identities, and queer theory is in the case of „Invisible Women“ less an omission than *strategic essentialism*¹ or what feminist cultural theorist Luce Irigaray has called „Mimesis“²: Perez intentionally accommodates the binary segregation of men and women at the benefit of her argumentation, in order to scrutinize its social implications. By provisionally accepting essentialist or generalizing assumptions for categories of gender and sex, she is able to expose a collective group as being underrepresented in a biased society.

The female body, unpaid work, and violence against women are the three main concerns Perez identifies as widely mis- or underrepresented in data collection. She exemplifies how those data gaps highly affect women’s lives in six parts, each part representing a different element of society, from public space (Part I), work environments (Part II), and product design (Part III), to healthcare (Part IV), politics (Part V), and disaster management (Part VI).

The fact that it is not easy to navigate through the book if not read cover to cover, might be seen as an illustration of how the male-bias operates. A lot of issues reappear throughout the chapters and different case-studies, making it clear how data gaps relate to one another, overlap, and facilitate each other, forcing possible cause-effect-chains to unmask themselves as a vicious cycle. Just one appalling example of the cyclic nature of discrimination described in the book is the failure to account for sexual harassment. As she does with all the data gaps she addresses, Perez presents

¹ The term was coined by postcolonial feminist theorist Gayatri Chakravorty Spivak. Cf. Spivak, Gayatri Chakravorty: *Other Asias*. Blackwell Publishing 2008.

² Irigaray, Luce: *Elemental Passions*. Routledge 1992.

extended research, in one case verifying the lack of safe toilets for women on a global scale and the correlation between sexual violence against women and access to „adequate sanitation“ (51). Women working in American tobacco fields for example have been reported to refrain from drinking (49), women in India report relieving themselves outside at night in the face of being violated in the form of „voyeurism (including being masturbated at)“ (50), „rape – and in extreme cases, [to] murder“ (50), leaving them at higher risk of dehydration, infections and diseases. The data gap on this issue reflects in city planning and architecture, exemplified here by the building of hospital floors (Chapter 6), public space (Chapter 2), or refugee camps (Chapter 16). By not accounting for the reality of women, these spaces enable harassment and the health issues it encompasses, which often goes unreported because it happens so frequently. In terms of data, no reports mean social invisibility, Perez explains in throughout all chapters, since men are unaware to this kind of aggression, as it is not something they experience in the same way. While consequently being less likely to address feminine issues, men are more likely to be in positions of power and decision-making (Chapter 4, 5, 6, 9, 14), one of the reasons for that being that women tend to restrict themselves, self-censor, or stand down, „*working in the context of extreme psychological warfare*“ (280) – a well-reported behavior presented as a consequence of habitualized sexual violence towards women in politics (Chapter 14).

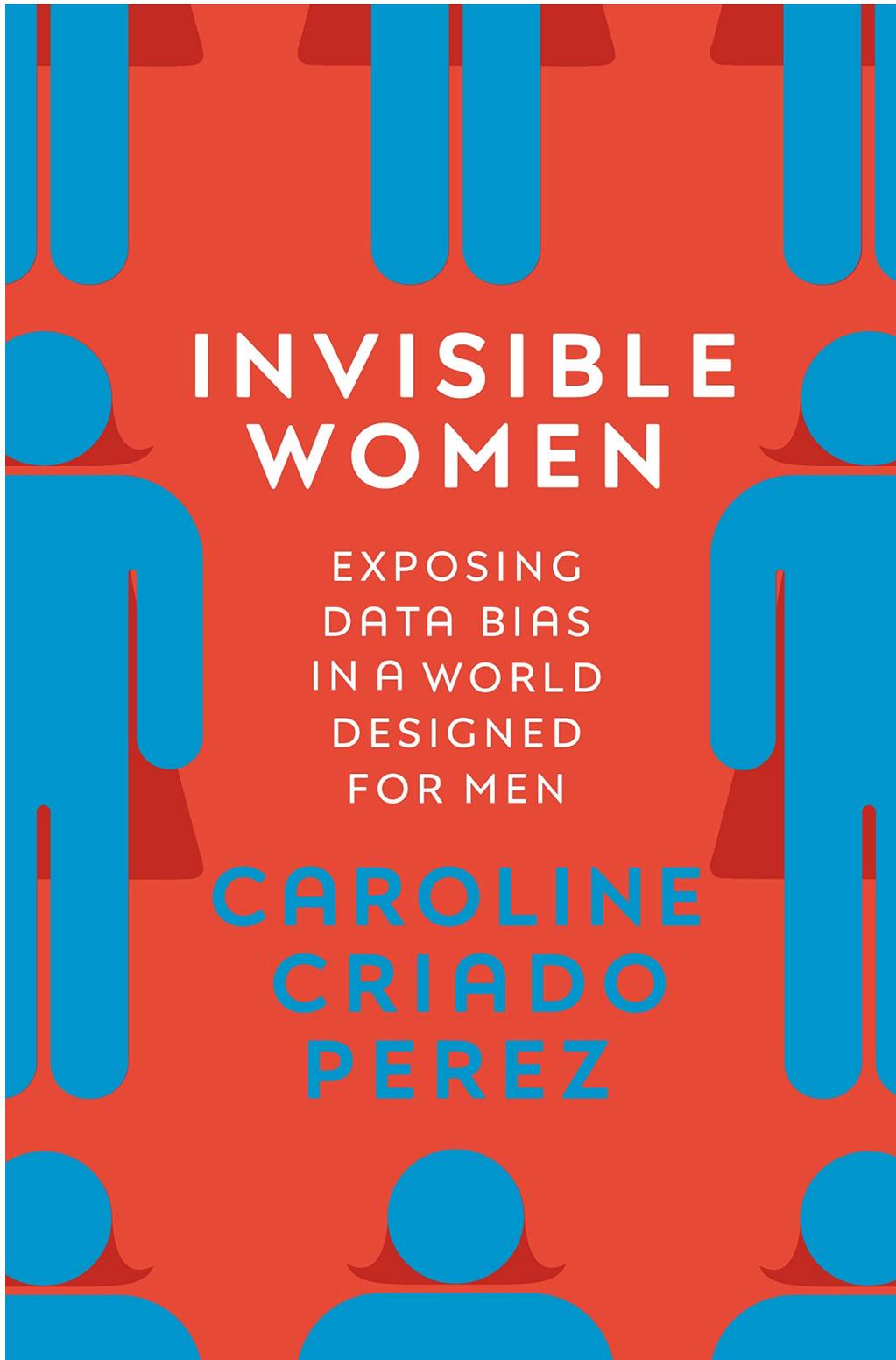
„Invisible Women“ is a presentation of data, collected from an impressively diverse amount of international studies in three different categories. In a first step Perez translates the gender bias into numbers, for example by referring to the „Draw a Scientist“ study³, in addition to drawing on second wave feminist theory or social psychological concepts such as the projection bias and naive realism. From exposing the bias she goes to exposing the gender data gap, presenting data collections that fail to take female bodies, environments, or occupations into account, like the car industry using male-bodied test dummies or the pharma industry basing trials on male subjects. The third type of data reveals the severe negative consequences of the data gap for women, for example their health seriously being affected or access to male-dominated industries being denied, which then again pays into the account of the gender bias. She also highlights positive consequences of projects that included gender specific data in terms of equality and diversity, for example when local officials in Vienna were able to make city parks more accessible to girls, after finding „*that from the age of ten, girls' presence in parks and public playgrounds ,decreased significantly'“*“ (63) and engaged in research to find out why that was.

³ In this study, conducted nearly 80 times since the 1960s, U.S. children are asked to draw a scientist, in order to examine the bias they learn in relation to gender and science. <https://www.edutopia.org/article/50-years-children-drawing-scientists> (April 2020).

„Invisible Women“ exposes the gender bias learned by children at a young age, inscribed into the language we speak, the products we consume, the entertainment we watch, and the places we go. Almost every chapter ends with an appeal to „us“, to *„start recognizing [unpaid work], valuing it, and designing the paid workplace to account for it“* (Chapter 3), to *„stop willfully closing our eyes to the positive discrimination that currently works in favor of men“*, or to *„stop acting as if theoretical, legal equality of opportunity is the same as true equality of opportunity“* (Chapter 14). While identifying groups of actors, who have the power to advocate change, Perez describes the gender bias as something deeply rooted in our society as a whole, making even those, who specifically intend to act gender neutral, fail in doing so. A quality of Perez’ writing surely is the eloquence with which she lays out statistical data, meandering between data from research institutes, activists, public, and private institutions, and her own experiences, or those of women in different positions and situations around the world.

Her focus point is the employment of gap-riddled Big Data used to create products, systems, or services, which she renders inadequate and even life-threatening for women via an impressive amount of case studies in 17 chapters. Most users are unaware of the data that is being used to construct the world around them, which makes it easy for biases to go unnoticed. In the context of Big Data, „Invisible Women“ is an eye-opening contribution to understanding how AI, Algorithms, data bases and software shape reality and will amplify gender bias if their programming does not account for it. Perez dismantles the association of data-based processes with gender-neutrality, based on the believe that raw data is „blind“ to the social construction of gender. If data on women is not collected in the first place or collected data not sex-disaggregated, the data will reproduce the bias it is fed. This book therefore is of great importance to anyone engaging in research or processing data, especially designers, architects, policy makers, programmers, physicians, analysts, and employers of all genders and sexes, as it challenges the reader to identify and scrutinize hidden biases and normative world views that might distort the pictures painted by the data used to validate their work. The quantity of examples suggests that there are many more oversights and areas where collected data could improve the lives of everyone.

Johanna Mehl, April 2020



Caroline Criado Perez

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