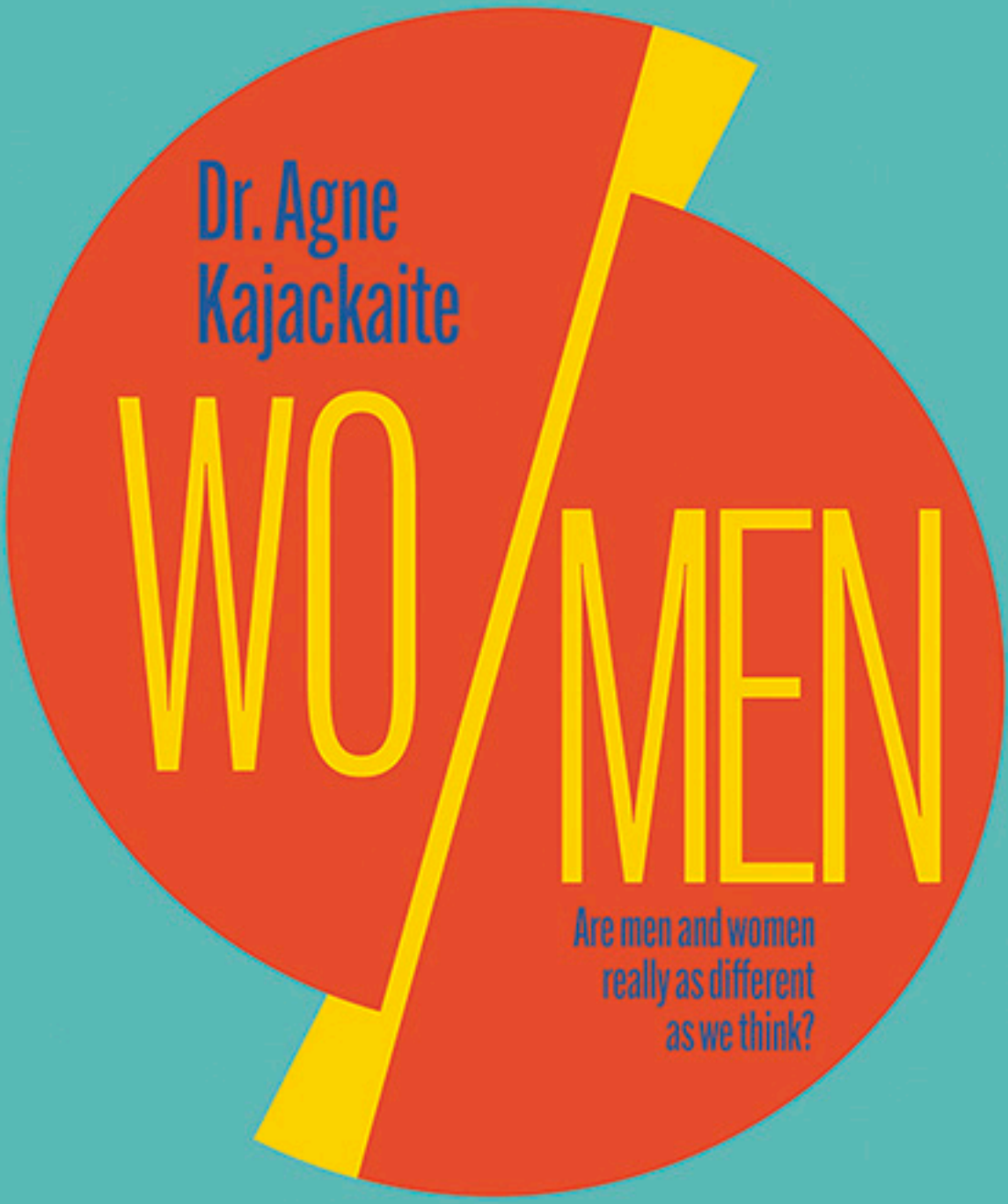

baltos lankos

WO/MEN

Are men and women really as different
as we think?

by

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PREFACE

I was encouraged to write this book after one particular piece of my research suddenly took off at whirlwind speed, grabbing newspaper headlines around the world.[1] It was December 2016 when my co-author Tom Chang and I sat down in his office in Los Angeles and started talking about the battle for the thermostat – it seemed that women were always freezing in the office while men preferred it cold. You have probably seen women wrapped up in shawls and men sweating in their suits in your own workplace. Tom and I decided to test whether it is only comfort that gets affected by temperature, or does the performance of men and women depend on temperature too. In particular, we were eager to know how thinking – cognitive performance – changes when we vary the temperature. Tom and I are behavioral economists, so the best avenue for us to follow was patently obvious. We decided to run an experiment and find out how men and women act in different room temperatures.

We published our study in May 2019, showing that women's cognitive productivity is indeed harmed by the cold temperature while men's performance is barely affected. The results of the experiment immediately gained

global attention. Suddenly, Tom and I were giving interviews to The New York Times, The Washington Post, Time magazine, CNN... you name it. Coverage of our research became the top trending article in the Atlantic: "Frigid Offices Might Be Killing Women's Productivity" – screamed the headline (and yes, in the Atlantic for a day or two the article was more popular than news about Donald Trump, which was a big deal at the time). Somewhat stunned by the international interest, I even gave a live video interview on BBC World News, barely managing to catch my breath as Tom and I went from studio to studio between TV and radio appearances. Within a couple of days, our "war for the thermostat" research had been covered in news articles in more than 60 countries (from China to Canada, Nigeria, Colombia, and even Azerbaijan and Zambia) and reached popular media such as People magazine, Cosmopolitan and even The Daily Show with Trevor Noah (in my dreams Trevor is reading this book... Anyway, thank you Trevor for the shout-out). Our temperature study was everywhere.[2] That is when I recognized that people were not just hungry for science, they were positively thirsting after it. They wanted evidential details of the whys and wherefores of the opposite sexes.

After realizing just how much fascinating research can be found lying around in scientists' drawers, not reaching the broad audience outside of academic circles (only a tiny fraction of excellent research that is out there reaches you), I decided to write a book on gender

differences and similarities based on science, so that I could educate as well as stimulate a wider audience.[3] There is SO much knowledge in scientific journals that is tucked away from people outside of the scientific world. I sometimes think of academia as a closed community that writes letters to each other in the form of scientific publications. For example, we write a paper and after it gets cited by 50 people, it never again sees the light of day. What a waste, and what a real shame. There are so many useful insights that never reach the people who would actually be interested in seeing them. The knowledge just needs to get out there.

Books backed up with science and written in layman's terms have gained a lot of popularity in recent years. In my opinion, the main reason for this trend is that the world is becoming a very complex place and we *humans* are curious creatures who want to understand why and how things happen. Obviously, we can't all choose or want to be scientists, but regardless of our job title, *each of us* is eager to understand more about the world and its people. That's where we scientists come into play. We dissect, probe, and examine, asking the tough questions that lead to our most interesting and important scientific discoveries. This book aims at summarizing and explaining some of these fascinating discoveries. And these scientific discoveries are about us – humans. In particular, they are about whether the battle of the sexes is real or all in our minds.

We are hungry and thirsty for fascinating new insights, and the goal of this book is to sate that hunger and slake that thirst.

I really hope you enjoy reading the book as much as I have enjoyed writing it.

INTRODUCTION

Back up your knowledge with science

Let's start with some "facts" I have learned from popular media and from casual everyday conversations with people about the differences between men and women. Here are just a few things which you have probably heard too: girls are worse than boys at math and science, men's brains are bigger and therefore they are more intelligent than women, men are less sensitive than women, women are better at multitasking than men, men are more aggressive than women. This list goes on and on, concluding with "Men are from Mars and women are from Venus"...

Some of the claims that I have just listed are false, some are partially true, while none of them are absolutely true. So why then do we treat these and other similar claims as absolute truths? The explanation is simple – we like to retell stories we have heard, or even make up our own stories – often unconsciously, we just repeat the stories we believe in. Some scientific studies

even show that "fake news" – or, in other words, lies – spread faster than facts and truth...[4] That's how new "knowledge" is sometimes brought to life, despite the fact that this knowledge is not backed by science or anything at all for that matter.

Gender is an important and sensitive topic that is discussed often and almost everywhere. Policies are made around gender and around insights we think we have on gender. It is therefore quite harmful that the discussion about gender differences, gender roles, and gender equality is so often based on non-scientific knowledge and stereotypes. We need science to back up what we think we know about gender. We need it right here, right now, and we need it badly.

And so, here we are. My intention is to back you up with knowledge about gender differences and similarities. To do so, I will get some help from my confidant – science – and provide exciting evidence from *experiments* (and, occasionally, surveys) with real people that show unequivocally how men and women make decisions. Here you will learn whether and how men and women take risks, which gender is just itching to compete, and how this urge to compete finds its roots in nature and nurture. You will also learn which gender is more honest, more altruistic, more confident, and more likely to change their behavior in accordance with the situation and social cues. I will give you answers to fascinating questions about men and women that you might have not yet thought to ask. For example, would men and women

prefer to donate their blood for some extra cash or for free? Or, does a woman's decision to choose a STEM (science, technology, engineering, and math) career depend on whether she grew up with a brother or sister? Finally, you may be surprised to hear that men and women are often more similar than one might think. You will learn about these (un)expected overlaps too.

My answers to all these questions about gender differences and similarities are based on *behavioral economics*, using data that scientists have been gathering for years (and sometimes decades). Contrary to common beliefs, I will show that economics can be fun (I know, hold onto your seat!), and can teach us a lot about forces behind our everyday decisions. You will learn that you make decisions in a systematic way, and how you can improve your decisions. You will discover the differences and similarities between female and male decision-making and it will help you to better understand and predict the people around you. I will saturate you with knowledge that will enrich your conversations with friends, family, partners and colleagues, next time you encounter them at the water cooler.

But before we get there, let me quickly introduce you to my beloved behavioral economics – the science behind the insights into what makes men and women act the way they do.

What exactly is behavioral economics?

I recently read this joke on X (Twitter): "Three economists walk into a bar. I leave." Let's face it, there's nothing really fun or sexy about economics. Though there's no accounting for every taste. But things started to change after books such as *Freakonomics* by Stephen Dubner and Steven Levitt, *Predictably Irrational* by Dan Ariely, *Nudge* by Richard Thaler and Cass Sunstein, or *Thinking, Fast and Slow* by Daniel Kahneman were published, and the field of behavioral economics became so popular. Now there is a huge fan group that just cannot get enough of this field of science. And I hope to contribute to this stream of literature by revealing some new insights from experiments in behavioral economics and will try to answer the question that is on everybody's lips – are men and women really so different? If you are not a fan of behavioral economics yet, let me give you an idea of what you're missing out on.

You might have heard of the term "homo economicus." Homo economicus is a purely selfish and fully rational human who will do anything to maximize their own benefit. In other words, homo economicus is somebody you do not want to be friends with. Imagine you are hanging out with Alex homo economicus (could be male or female, the gender doesn't matter here) in a

restaurant and you need to go to the bathroom. You ask Alex to look after your bag. Will you find your belongings intact when you come back to the table? If there are any valuable items in your bag and the chance of being caught is low (let's say there are a number of people in the restaurant and any one of them could have taken your bag), you will most certainly not find your bag or likely even Alex. A homo economicus weighs the costs and benefits of an action and will do whatever pays more (in economics terms, they maximize their "expected utility"). In this case, the bag is more valuable than the friendship. What's wrong with this story? You were never friends in the first place, since a homo economicus has no friends.

Why am I talking about this weird creature you might ask? Well, for hundreds of years, homo economicus has played the lead role in the science of economics, being the basis of all scientific theories and thoughts. In fact, the assumption that *all* humans behave in this selfish and rational manner was the main assumption of most mainstream economic theories. As early as 1776, Adam Smith infamously wrote in "The Wealth of Nations": "*It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest. We address ourselves, not to their humanity but to their self-love, and never talk to them of our necessities but of their advantages.*" Clearly, this is a simplification of the reality, which needs to be simplified in this complex world if we want to build any

theories. But assuming that all humans are fully selfish and rational does not sound right, does it? So, what behavioral economics does is loosen these assumptions and test how *real humans behave*.

So how can we find out how real people actually behave in a given situation? Well, by testing real human beings. Experiments come in handy for testing behavior: just like in the sciences of medicine, physics, chemistry or psychology, in economics we can also use experiments to see how A affects B, in other words, how some trigger/circumstance/condition/treatment/... affects one's behavior. For a very long time, economics was missing this human factor, but things have changed and experimenting with people to see trends in their behavior and their reactions to triggers and interventions is a normal procedure for many economists today (and don't worry – we experiment in an ethical way with the full approval of an ethics board and the consent of participants).

The concept of an experiment in economics might still sound pretty abstract to you (if you are not one of the behavioral economics fans I mentioned earlier), so let me give you an example of an experiment in economics. To do this, I will go far back in time and introduce you to a classic in our field – Allais Paradox.[5] In 1953, Allais conducted a hypothetical experiment on risk-taking. He asked participants to make choices between gambles. The first choice was between these two gambles:[6]

Option A:
Winning €100,000 for certain

Option B:
There's a 10% chance of winning €500,000
There's an 89% chance of winning €100,000
There's a 1% chance of winning €0

Which option would you pick?

If you are like most people in Allais's experiment and the many experiments that followed this one, you would go for a certain win. Then €100,000 sounds very good – why take the risk of going home with nothing if the second gamble goes badly wrong?

Now make another decision between gambles C and D:

Option C:
There's an 11% chance of winning €100,000
There's an 89% chance of winning €0

Option D:
There's a 10% chance of winning €500,000
There's a 90% chance of winning €0

Have you chosen between options C and D yet? What do you think other people in experiments by Allais and other scientists chose? Well, this time the choice is between two pretty unlikely wins. And since for most people

there's not much difference between a 10 or 11 percent chance, the majority went for option D – a bigger prize with almost the same (perceived) chance as the smaller prize. So, there you go: Option A was more popular than B, and D was more popular than C. Is this human behavior consistent with the behavior of our old friend, homo economicus? Let's find out.

Homo economicus is a fully rational being that follows certain rules when maximizing its "expected utility." One of the rules it follows is so-called "independence": If homo economicus chooses X over Y, then it will also choose X + z over Y + z. It's as simple as that. However, real humans violate the "independence" rule and do so very often. You might have just done so yourself a minute ago if you (like most other real people) picked Option A over B, and Option D over C in Allais game... You see, for us humans it is not as simple to weigh X over Y and then weigh X + z over Y + z, as it is for the marvelous homo economicus.

Want to know how you violated the "independence" rule? Here's a tiny paragraph of math for you. Look at the options you had again. Option A is nothing else but Option C plus €100,000 with an 89 percent chance, and similarly, Option B is Option D plus €100,000 with an 89 percent chance. That is:

A=C+100,000*89%
B=D+100,000*89%

So, if you prefer D over C, you should also prefer B (D + x) over A (C + x). However, most of you violated the rule and picked D over C, and A over B.

The "independence" example might not have been the sexiest choice, but I hope you saw how unrealistic the assumption of homo economicus was and how much more complex real humans are. Homo economicus is a fully rational creature who would take a look at these gambles, calculate the costs and benefits, go on to the next task, and would complete the task without any human "mistakes." But I would not. You would not. And other human beings would not, either. Luckily, we can make experiments the tool we use to see how real people behave. Based on these actual behaviors of people, we can see the trends behind the behavior, build new theories based on these regularities, and make predictions about future behavior.

Let me give you another example of a general experiment before we dive into experiments on the differences and similarities between men and women. Imagine you are a participant in a laboratory experiment. Let's say you are in our lab in Milan. The layout of the lab looks like this: there are 24 work stations with computers separated by office dividers and some space at the front of the room for the experimenter. No white coats, no test tubes – just a simple room with computers looking somewhat like an open space office. You and 23 strangers enter the lab and are seated in cubicles. You did not just wander into

the lab – you and the other participants were randomly selected from a large subject pool (you signed up for it some time ago after you saw ads about the experimental economics lab). There is anonymity – no other participant knows your name, nor do you know any of the other participants. The experimenter gives a general introduction and explains the rules of the game.

The game you are playing today is very simple. You have all been divided into pairs and you do not know who you will be interacting with. You do know, however, that your partner is some other person sitting somewhere in the lab. Half of you are participants A, the other half participants B. You were randomly chosen to be participant A, which means that your counterpart is participant B. You are asked to make a single decision. We give you €10. However, your counterpart B is not given any money. We ask you to decide how much of this money you want to give to your counterpart. You can pick any amount between €0 and €10 with an integer of one. That is, you can decide to send him €0, €1, €2 €2... €10. You then need to type your donation amount into the computer. And that's it. After that, there are no other decisions to make. Each of you will go separately to the experimenter to collect the money you earned and you will then leave the laboratory. Now, how much would you like to give to participant B?

Have you made your decision yet? You might have chosen to give your counterpart €1, €2 or maybe even €5.

You might be altruistic, care about fairness or just anticipate a guilt that would haunt you at night if you didn't give anything to the other participant (I'm being a bit overdramatic, but even if you can sleep like a baby, you still might feel some guilt). Some of you, however, might decide to give zero. You might really need the money or you may just not see why you should give anything to a complete stranger who means nothing to you. The choices I have just listed are indeed the most popular choices we see in the lab. Experimental evidence with thousands and thousands of people shows that in this game (we call it "the dictator game") around one third of people do not give anything to their partner. This behavior is very much in line with what you have just learned about homo economicus (and you should not feel bad if you chose zero; I made the same choice in an experiment in my grad studies because I really needed the cash at that time). The remaining two thirds of people do share, though. Most people give just a moderate amount, perhaps just a couple of euros. However, one sixth of people decide to share the money equally and give €5 to their partner, and there are 5 percent of very altruistic souls who give ALL (!) the money to their partner.[7] They sound like much nicer friends than homo economicus, am I right?

Experiments like this are very simple. They are short and straightforward, but at the same time they give us very valuable lessons. For example, from the dictator game we learn about the distribution of altruistic/inequity-averse

and selfish people in the sample and can also make inferences about the preferences in the population in general. That is, in most cases experimental and behavioral economics use simple games with real money to learn more about people's choices. These experiments teach us how *real* people make real decisions, and we all want and need to understand more about human nature so that we can make more informed decisions in the future.

Now – what about gender? We incorporate gender into our research by inviting both men and women to our experiments. We record our participants' gender during the experiments so we can then find out how men and women tend to make their choices.[8] Using data from economics experiments, we can see how different the decisions made by men and women are in these games.

For example, who do you think gives away more money in the dictator game you just played in your mind – men or women? Do they differ in their giving deci-sions at all? You will learn the answer to this question in Chapter 3 (*Who is nicer?*), and this answer may not be as straightforward as you think. In fact, while the incorpo-ration of gender into experiments is simple, the answers that these experiments give us are often not so simple to discern. When it comes to gender, it is often not a simple matter of black or white but rather many shades of gray... And you will learn a great deal about the nuance between these layers of gray in the coming chapters. So, ladies and gentlemen, let the games begin!