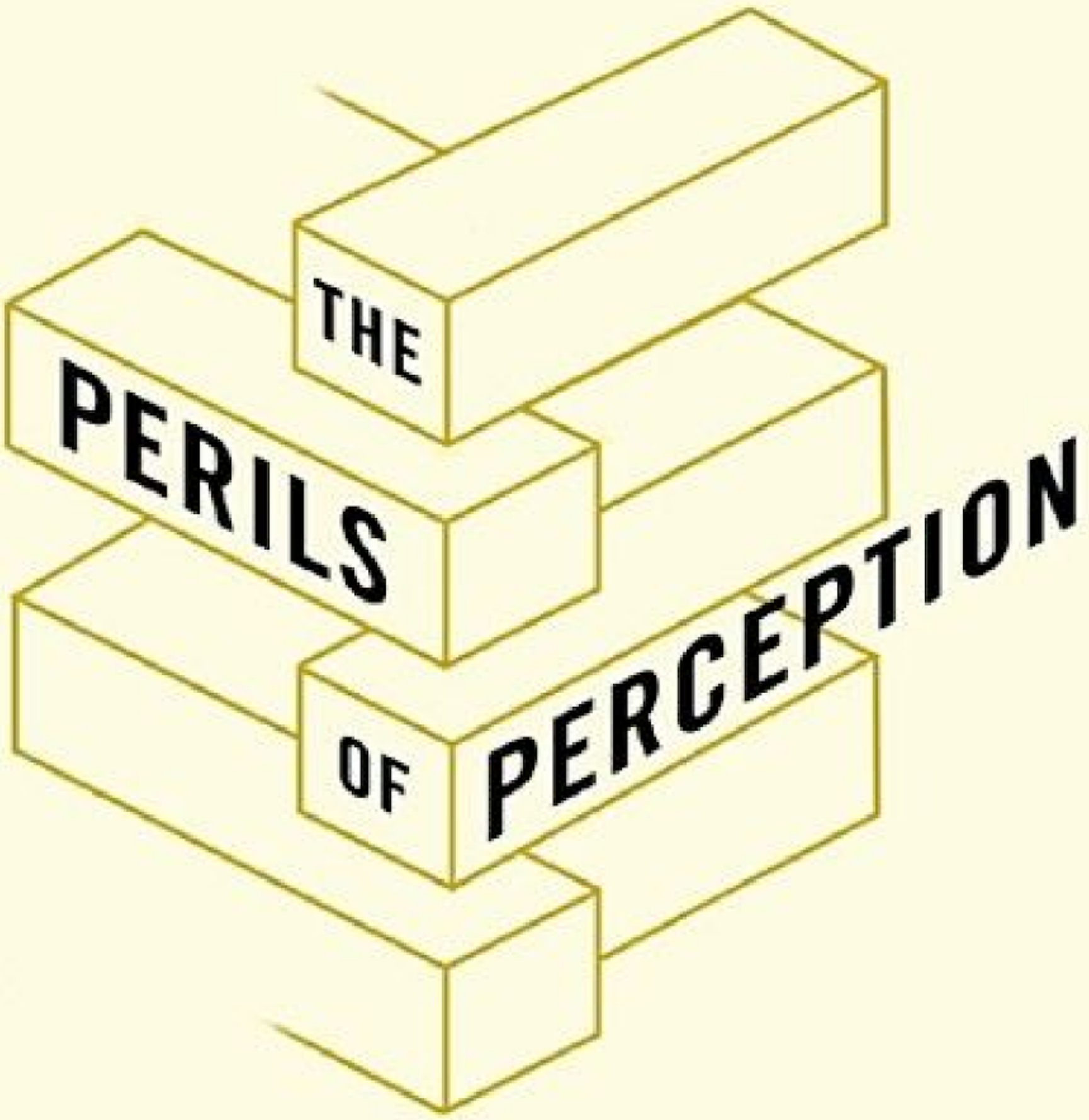


WHY WE'RE WRONG ABOUT NEARLY EVERYTHING

BOBBY DUFFY

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Introduction

# Perils Everywhere

I hated my psychology classes at college. As I remember them now, they were taught by a succession of super-smart, suave professors with identikit looks, closer to snake-hipped rock stars than fusty academics. They were all tall and slim, with haircuts that didn't play by professorial rules. They wore all-black clothes or, at a push, paisley shirts, and shoes that were just that bit too pointy. (I admit, jealousy may be clouding my own perceptions a little; in fact, I think I've just described Russell Brand.) The students, of both genders, swooned – not so much because of the professors' rebellious looks, but because they seemed to know so much about how we thought. There's nothing more attractive to most confused young adults than someone who *really* understands them.

But I had a problem with that. I hated the cognitive tricks that proved we nearly all fall into the same mistaken ways of thinking. They'd set us up with questions or experiments that were custom-made to elicit a particular answer and show how typical our brains were. At that insecure but arrogant age, I wanted to be special and unpredictable – but my answers

were just like everybody else's.

Take this example, from a professor at the University of Maryland:

> You have the opportunity to earn some extra credit on your final grade. Select whether you want two points or six points added onto your final paper grade. But there's a small catch: if more than 10 per cent of the class selects six points, then no one gets any points, not even the people who chose two points.[1]

Here is a very direct and teachable moment, a lesson in the 'tragedy of the commons' – where individuals try to obtain the greatest benefit from a particular resource, taking more than their equal or sustainable share, and therefore ruin it for everyone, including themselves. Of course, the class conformed to type, and failed. Around 20 per cent selected six points, so they all got nothing. In fact, only one class in one semester over the eight years the professor had been conducting his mildly cruel experiment had actually managed to get the extra credits.

Given my lingering sensitivity to psychological tricks, it's not without irony that a lot of my working life has been focused on running similar tests. I've spent the last twenty years at opinion research firm Ipsos MORI, designing and dissecting research from around the world to help understand what people think and do, and why. For the last ten years I've run hundreds of surveys on public misperceptions – what we call the 'Perils of Perception' – investigating a range of social and political issues, from

sexual behaviour to personal finance, across a large number of countries. We now have over 100,000 interviews, across forty countries on some questions, allowing us to weigh up our perceptions against reality. This is a unique and fascinating source of data on how we see the world, and why we're often so wrong: previous work has tended to focus on one issue or sphere of life, and few get beyond a handful of countries. You can dig into the full set of Ipsos studies at: www.perils.ipsos.com

Across all the studies and in every country, people get a lot wrong on nearly every subject we've covered, including immigration levels, teen pregnancy, crime rates, obesity, trends in global poverty and how many of us are on Facebook. But the key question is 'Why?'.

Let's start off with a question that's got very little to do with the sort of social and political realities we'll look at later, but helps to highlight why there might be this gap between perceptions and reality: 'Is the Great Wall of China visible from outer space?' What do you think? If you're anything like the population in general, there was about a 50–50 chance that you answered 'yes', as surveys show that half of people say they believe the Great Wall is visible from space.[2] They're wrong – it's not.

At its widest, the Great Wall is only nine metres across, about the size of a small house. It's also built of rock that is similar in colour to the surrounding mountains, so it blends in with the landscape. When you take a bit of time to think about it, the idea that the Great Wall is visible from space is actually slightly ridiculous, but there are some very good

reasons why you might have thought it is.

First, it's not something you'll have pondered on a lot. Unlike me, you probably haven't looked up the width of the Wall or its distance from outer space (and then got caught up in endless forum discussions about the claim). You don't have the pertinent facts readily available to you.

Second, you may have vaguely heard someone say it when you weren't paying much attention. You may even have seen it in print or heard it on the television. For years, Trivial Pursuit had it as an (incorrect) answer. You're less likely to have seen it in Chinese school textbooks, but it's still noted as a fact in those. However, you've likely seen it somewhere and haven't seen anything to contradict the assertion, so it settled in your head.

Third, you almost certainly answered the question quickly, wanting to get on with the rest of the book – the sort of 'fast-thinking' popularized by the Nobel prizewinning behavioural scientist Daniel Kahneman that relies on mental shortcuts. You may therefore have confused different measures of scale. We know that the Great Wall of China is extremely 'big' – in fact, it's one of the largest man-made structures on earth. But that is mainly due to its length, which isn't the property that will make it visible from outer space.

Most important, your answer was also perhaps more emotional than you might think for such a mundane trivia question. Spend some time researching the answer, and you'll discover that even *astronauts* argue over it. (For the record, Neil Armstrong says it's not visible, which is good enough for me.) You'll even find photos from seemingly reliable sources

purporting to show the Great Wall as seen from space. (In at least one case, the photo was of a canal.) With something as big as the Great Wall, we *want* to believe that astronauts, aliens, even gods, can see our handiwork. We want it to be true because it's impressive – and this emotional response alters our perception of reality.

Drawing on faulty prior knowledge, answering a different question than the one we are asked, juggling comparisons across different scales, relying on fast-thinking and missing how our emotions shape what we see and think, are just some of the perils of perception we face every day. The Great Wall of China is a real, physical thing, an object that can be measured. Imagine now how the same problems of perception wreak havoc when we are contemplating complex and disputed social and political realities.

But there is a final point. Now I've pointed out that the best evidence is that the Great Wall is not visible from space, you probably believe me, and if you had a vague idea it was, you've probably shifted your view. Of course, this is not a highly-charged debate, tied up with your identity and tribal connections, so it is easier to shrug and update your view. But still the point remains that we have the ability to adapt our beliefs in the face of new facts.

Having started with (literally) a trivia question, it is worth emphasizing that this is firmly *not* the focus of the book, fascinating and satisfying as (other people's) factual ignorance and belief in the absurd can be. We love to smirk at the one in ten French people who still believe the earth may be flat; the quarter of Australians who think that cavemen

and dinosaurs existed at the same time; the one in nine Brits who think the 9/11 attacks were a US government conspiracy; or the 15 per cent of Americans who believe that the media or government adds secret mind-controlling signals to television transmissions.[3] Our main interest is not niche stupidity or minority belief in conspiracies, but much more general and widespread misperceptions about individual, social and political realities.

Let's look at one very basic question about the state of society that is much closer to our focus: 'What proportion of the population of your country is aged sixty-five or over?' Think about it yourself. You may have heard that your country has an ageing population, or that it even faces a demographic 'time bomb', that the population of older people is getting too large for the younger people in your country to support in their retirement. The media frequently highlight the pressures on the economy of supporting a growing elderly population, particularly in countries such as Italy and Germany. There have even been stories on how, in Japan, adult nappy sales are set to overtake baby nappy sales. These stories may be apocryphal, but they provide such a vivid image that they stick with us.

So, what would you guess?

When we asked members of the public in fourteen countries, in every single country the average guess was much higher than the actual proportion. In Italy the actual figure is 21 per cent, while in Japan it's 25 per cent. These are big numbers – one in five and one in four of the whole population, and roughly double the proportion compared to a

generation or two ago. Yet, the average guesses were around twice the actual population figures. People in Italy thought 48 per cent of the population – about half – were sixty-five or older.

As you can see from this one, very simple example, our misperceptions are not just driven by the particularly febrile political moment we're living through. There are no massive misinformation campaigns by automated bots on Facebook or Twitter trying to convince us that our populations are older than they really are, but we're still very wrong. Our misperceptions are wide, deep and long-standing. Political ignorance has been a concern from the very dawn of democracy, with Plato's grousing that the general public were too ignorant to select a government or hold it to account.

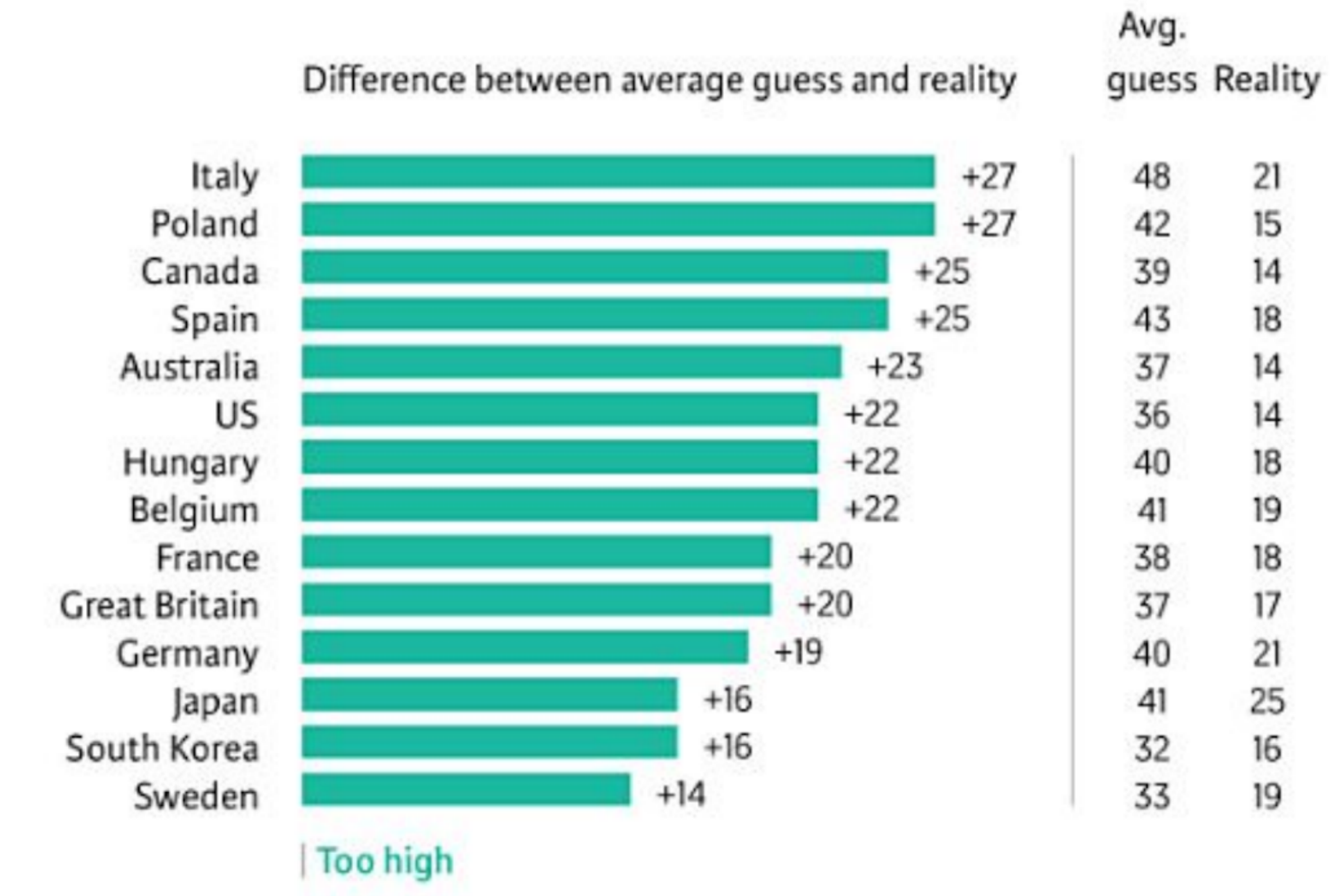


**Figure 1.** All countries hugely overestimated the proportion of their population aged 65 or over.

It is hard to prove that misperceptions have been widespread for a long time, because measuring them requires representative surveys, and social scientists started conducting rigorous public opinion polls only relatively recently. In the middle of the twentieth century, surveys of people's perception of social realities were rare, limited primarily to simple political facts – for example, which party was in power, what their policies were and who the leaders were. But some of these early questions, first posed as far back as the forties, have been asked again in recent studies and, as we'll see, the responses suggest that nothing much

has changed.[4] People were as likely to be wrong back then as they are now, long before 2016, when 'post-truth' (the idea that objective facts are less influential in shaping public opinion than appeals to emotion and personal belief) was named 'Word of the Year' by Oxford Dictionaries.

That's not to say that our current, ideologically-driven discourse and the explosion of social technology have no effect on our perceptions of reality, or that we're not living in particularly dangerous times. In fact, those technological shifts are particularly terrifying in their effect on our accurate view of the world or key issues – because the quantum leap in our ability to choose and others to push 'individual realities' at us plays to some of our deepest biases, in preferring our existing world view and in avoiding conflicting information.

But that's exactly the point – if we only focus on what's *out there,* what we're told, we'll miss a key element of the problem: it's partly *how we think* that causes us to misperceive the world.

This raises an important point about the findings of the Perils of Perception surveys – the focus of these studies is not primarily to root out *ignorance* so much as to discover *misperceptions*. It seems a fine distinction, and drawing a clear line between the two is often difficult in practice, but the principle is essential.

Ignorance means literally 'to not know' or to be unacquainted with. Misperceptions, however, are a positive misunderstanding of reality or, as Brendan Nyhan, a professor of government at Dartmouth College in New

Hampshire, and his colleagues put it: 'misperceptions differ from ignorance insofar as people often hold them with a high degree of certainty... and consider themselves to be well informed'.[5] Few of the people we've surveyed think of themselves as ignorant; they are answering what they believe to be true.

In practice, rather than a neat delineation, there is a spectrum of false belief from ignorance to misperception. People are moveable and unsure of their certainty in many cases. The distinction shows up how difficult it is to change people's misperceptions simply by giving them more information, as though they are an empty vessel just waiting to be filled with facts that will fix their mindset and behaviour.

An investigation of misperception instead of ignorance shifts the focus from public opinion as a blank slate to be written on, to a sense of a range of people holding a range of opinions and beliefs motivated by many of the same, underlying ways of thinking. It raises the vital question of *why* we believe what we do – this is the real value in understanding the perils of perception. Our misperceptions can provide clues to what we're most worried about – and where we're not as worried as we should be. As we'll see, attention-grabbing stories of teenage pregnancies or terrorist attacks make us think these phenomena are more common than they really are, while our own self-denial leads us to underestimate obesity levels in the population as a whole.

Our misperceptions also provide more subtle lessons. What we think others do and believe – that is, what we think the

'social norm' is – can have a profound effect on how we ourselves act, even when our understanding of that norm is hopelessly misguided. For example, many of us are saving too little into our pension pots to support a decent lifestyle when we retire – but we think this is more common than it actually is. Given we instinctively feel there is safety in being in the 'herd', this misperception that it's normal not to save could negatively impact our own behaviour.

More than that, when we compare what we think *others* do to what we say *we* do, we get a hint of how we view those behaviours – for instance, what things we do that we're ashamed of. Sometimes what we're ashamed of is surprising – and enlightening. As we'll see in the first chapter, it seems we're more ashamed of overeating sugar than of not exercising. Realizing that we're more likely to lie to ourselves about how much sugar we consume is a vital step to improving our health – as individuals and as a society. There are lessons for each of us, even if we feel pretty well-informed about the world. Our errors aren't about gross stupidity: we're all subject to personal biases and external influences on our thinking that can distort our view of reality.

We can classify all the varied explanations of our misperceptions into two groups: how we think and what we're told.

## How We Think

We have to start with how our brains grapple with numbers, mathematics and statistical concepts. Given that we're often asked to quantify the world and our perceptions of it,

numeracy plays a large part in how well we understand the world overall. The statistics about data growth are themselves impossible for us to fully grasp: incredibly, over 90 per cent of the data on the Internet was created in the last two years; 44 billion gigabytes of data were created on the Internet *every day* in 2016, but this is projected to grow to 463 billion gigabytes a day by 2025.[6] With the exponential growth in data being created and communicated about many of the things that concern us, the issue of numeracy is ever more vital.

Dealing with the types of calculations we now need to make doesn't come completely naturally to many of us. MRI studies of the brains of humans (and monkeys!) indicate that we have an inbuilt 'number sense', but we are particularly attuned to the numbers one, two and three, and, beyond that, to detecting large (not small) differences in comparing numbers of an object.[7] We often fall back on these evolutionary number skills.

But much of life involves calculations that are more complex than comparing the relative size of small numbers. A century ago the great science fiction writer H. G. Wells said:

> … endless social and political problems are only accessible and only thinkable to those who have had a sound training in mathematical analysis, and the time may not be very remote when… for complete initiation as an efficient citizen of one of the new great complex world-wide States that are now developing, it is as necessary to be able to compute, to think in averages and maxima and minima, as it is now to be able to read and write.[8]

Wells's reference to how important mathematical understanding is to 'endless social and political problems' seems made for our times, but we've got a long way to go before we'll completely satisfy his vision. Countless experiments show that around 10 per cent of the public don't understand simple percentages.[9] Many more of us have problems understanding probability. The French scholar, Laplace, called probabilities 'common sense reduced to a calculus', but that doesn't make most of us any better at calculating them.[10] For example, if you spin a coin twice, what's the probability of getting two heads?

The answer is 25 per cent, because there are four equal-probability outcomes: two heads, two tails, heads then tails and tails then heads. Worryingly, only one in four people in a nationally representative survey got this right, even when they were prompted with multiple-choice answers.[11] This may seem a rather abstract test of our ability to understand key facts about the world, but, as we'll see, probabilistic thinking is the foundation for building an accurate sense of social realities.

Even more worryingly, we don't seem to be that bothered about our lack of basic mathematical fluency. In a study we conducted for the Royal Statistical Society in the UK we found that, contrary to Wells's vision, we put much more importance on words than we do on numbers (which was a bit depressing for both me and the Royal Statistical Society). When we asked people what would make them prouder of their kids, being good with words or being good with numbers, only 13 per cent said they would be most proud

about their child's mathematical ability, with 55 per cent saying they'd be most proud of their child's reading and writing ability. (The other 32 per cent said they wouldn't be proud about either, which seems particularly mean-spirited tiger parenting!)[12]

Our misperceptions are very far from all being about our less-than-perfect knowledge of probabilistic statistics. Over the past decades, pioneers in the fields of behavioural economics and social psychology have conducted thousands of experiments to identify and understand other mistakes and shortcuts commonly made by the human mind – what are called 'biases' and 'heuristics'. They have explored our bias towards information that confirms what we already believe, our focus on negative information, our susceptibility to stereotyping and how we like to imitate the majority. As Daniel Kahneman and his long-time collaborator Amos Tversky hypothesized, our judgements and preferences are typically the result of so-called fast-thinking, unless or until they are modified or overridden by slow, deliberate reasoning.[13]

One common mental error that is worth flagging upfront, both because it may be less familiar and because it is so crucial to many misperceptions that we'll discuss, is 'emotional innumeracy', a theory which proposes that when we're wrong about a social reality, cause and effect may very well run in both directions. For example, say that people overestimate the level of crime in their country. Do they overestimate crime because they are concerned about it, or are they concerned about it because they overestimate it?

There are good reasons to think it's a bit of both, creating a feedback loop of misperception that is very difficult to break.

Finally, there is the possibility that our misperceptions are almost entirely shaped by instinctive workings in our brain – an idea born out of the field of psychophysics (the study of our psychological reactions to physical stimuli). This has only just started to be applied to social issues, and analyses by David Landy and his graduate students Eleanor Brower and Brian Guay at Indiana University suggest that a significant portion of many of the errors we make in estimating social realities might be explained by the sorts of biases they see in how people report physical stimuli. For example, we underestimate loud sounds and very bright light, and overestimate quiet sounds and low lights, in a quite predictable way – a pattern we also see in the data about how we perceive the state of social and political realities. We hedge our bets towards the middle when we're uncertain, which may mean that our underlying view of the world is not as biased as it might seem.

However, unlike sound and light, the realities we'll look at are often socially mediated and our explicit estimates have meaning to us, that we defend, and are related to other attitudes. Despite this, I find psychophysics an encouraging addition to our understanding of our misperceptions: we may not always be as wrong as we think, or, rather, our errors may not represent such a biased view of the world.

## What We're Told

The second group of factors influencing how and what we

think about the world are external in origin.

First, there is the media. Whenever I present any findings from the Perils of Perception surveys at conferences, without fail the very first 'question' I get – sometimes shouted from the audience, while I'm still speaking – is: 'That'll be the *Daily Mail* effect!' (if I'm in the UK) or 'That'll be the Fox News effect!' (if I'm in the US) or 'That'll be the fake news effect!' (when I'm presenting, well, anywhere).

'Fake news' as a concept quickly gained incredible traction in 2017, being named 'Word of the Year' by at least one dictionary publisher. But I think it's a pretty unhelpful term, and it has only passing relevance to the types of misperceptions we're interested in here, for a couple of reasons.

Properly defined, it's way too small a concept. Our key misperceptions do not have their roots in entirely fabricated stories, created sometimes as clickbait to earn money for the creators and publishers or for more sinister reasons, as we'll explore.

Even this limited use of the term has been undermined, mainly by the locus of many of the 'real' fake news stories, Donald Trump, as he has helped turn it into an attack phrase for both the media in general and individual reports that opponents do not agree with. The '2017 Fake News Awards' hosted on the Republican Party's website, for example, featured a perplexing array of 'winners', from actual errors in reporting, tweets from a journalist's personal account that had been retracted and deleted, photographs that showed crowds as smaller than they really were, supposed faux pas

on how to feed koi carp, rebuffed handshakes that turned out to be accepted – all the way up to a denial of collusion with Russia during the 2016 presidential election.

As we will see, our misperceptions are far from being just a 'fake news effect' – although we will look at the incredible reach and frightening levels of belief in a few of the highest profile examples of actual fake news, to highlight the broader challenge of disinformation.

While there is going to be relatively little simplistic media-bashing in our explanations, it is still a vital actor in the system creating and reinforcing misperceptions. However, the media more generally is not actually the most important root cause of our misperceptions, though it is influential: we get the media we deserve, or demand.

These days, information technology and social media present even more challenges to our perception of facts, given the extent to which we can filter and tailor what we see online, and how it is increasingly done without us even noticing or knowing it. 'Filter bubbles' and 'echo chambers' incubate our misperceptions. Unseen algorithms and our own selection biases help create our own individual realities. The pace of technological progress that is allowing this splintering is frightening, but also so apparently complex and unstoppable that it's numbing. A very few years ago the suggestion that we would each be experiencing our own individual realities online would have seemed like a *Black Mirror* episode, but now it's accepted with a shrug. That is dangerous, because it plays to some of our deepest psychological quirks – our desire to have our already held

views validated and our instinctive avoidance of anything that challenges them.

Our complacency may be shaken by the latest scandal engulfing Facebook, where the data of around 87 million users appears to have been used by political consultants Cambridge Analytica to target communications during the 2016 US presidential campaign and the EU Referendum vote in Britain. However, the initial signs are that even this shocking example is not leading to wholesale rejection of our 'filtered world': even at the height of coverage, technology monitoring firms reported the worldwide usage of Facebook remained within normal, expected ranges.[14]

Politics and political culture also feed directly into our misperceptions. Few of us have regular, direct personal contact with serving politicians, so much of what we're told by politicians and the government comes via the media, and the statements made by politicians gather a disproportionate amount of media coverage, particularly during key election campaigns. And in recent years we've had a glut of key campaigns. Both Donald Trump's election in America and the Brexit vote in the UK were widely called out as the apogee of deceptive communications, giving birth to new phrases such as 'alternative facts'. Yet, of course, there has never been a golden age when political communications were 100 per cent accurate, in any country. For example, in France in the mid-1600s, during the Civil War, an infamous series of pamphlets provided an outlet for justified outrage at royal suppression, alongside entirely fake accusations that Louis XIV's chief minister Cardinal Mazarin had committed a whole series of

sexual transgressions, including incest.[15]

Of course, it is increasingly the case that politicians do communicate directly with people through social media, with President Trump's tweets becoming so central to his communications that his press secretary confirmed they were official announcements. As a result, some Twitter users tried suing for being blocked from seeing them, and there have even been calls to add them to the National Archive: we can rest easy, 'covfefe' will be preserved for future generations.[16]

Finally, there is that thing we call real life – what we see directly ourselves; what we hear from family, friends and colleagues; what we confront when we're out and about in the world. Not all of our views about social realities are created from television or Twitter. But as we'll soon see, there are significant risks from assuming that our own experience is completely typical – beginning with how we take care of our health.

*

In the following chapters I'll take you on a tour of what we think and how we think about some of the biggest decisions facing us today, from how much money to save for retirement and how to respond to concerns about immigration, to how to encourage people to engage with global poverty. As we look at where we get things wrong, we'll also consider how we can get things right – both as individuals and as a society. It is possible to become more aware of the realities on which our decisions rest. We don't have to fall prey to the peril of our

misperceptions.

Keep in mind these five points as you read through the chapters that follow and we explore our misperceptions and the reasons behind them:

1. Many of us get a lot of basic social and political facts very wrong.
2. What we get wrong is as much about how we think as what we're told – which means, as much as we'd like to, we can't merely blame the media, social media or politicians for our mistaken beliefs.
3. Our misperceptions are often biased in particular directions, because our emotional responses influence our perceptions of reality. Our misperceptions therefore provide valuable clues that we shouldn't just laugh at or ignore.
4. Understanding the real reasons we're wrong gives us a better chance to shift our misperceptions, individually and collectively.
5. It's not all hopeless, in at least two ways: the world is not as bad as we think and it's often getting better; and we're not as completely enslaved by our wrongful thinking as it sometimes seems we are – we do change our minds, and facts still matter in that.

I feel privileged to have worked on such a variety of fascinating studies, to be able to understand our misperceptions from many different points of view. I have no vested interest in ascribing the source of our misperceptions to one particular cause, or to conclude that only one particular action will solve it. The reality is the causes are multiple, as are the actions required.

One point is worth emphasizing: I passionately believe that facts still matter in this, and have a role to play in forming

our views and behaviour. It is *not* okay to create or encourage misperceptions just because it suits our purposes or taps into something people *feel* is true. We need to recognize that our emotions and patterns of thinking are important parts of the explanation – a fuller understanding of why we are wrong is our only chance to move us closer to reality. And that is the aim: to hold on to a fact-based understanding of the world.

There is also plenty of hope.

The reality of how the world is now and how it has changed are both better than we tend to think. There has been remarkable progress across so many of the social issues we'll look at. That's not the same as saying things are perfect, or we couldn't have done more, but a sense of optimism is justified by many measurable facts.

While much of the evidence I'll focus on from social psychology vividly outlines our biases, this should not lead us to conclude that we're automatons, immune to reason and new information. Maybe not surprisingly, I haven't entirely given up my student-days' suspicion that the human mind is utterly predictable. I hope this book lays out a balanced view: I show some startlingly wrong perceptions of the world, and how many of the reasons for that are due to how we think – but also that there is more hope than there may at first seem, and facts still matter in that.

One of the most fascinating aspects of our misperception studies for me has been gathering information on the realities across a wide range of social issues and so many countries. It provides a great reminder of not just how worrying or encouraging reality can be, but also of the huge

diversity of behaviours and views across different nations. One of our in-built biases is to assume that other people are more like us than they really are. This data proves how wrong that assumption often is. If nothing else, I hope this book will show you what a varied and extraordinary place the world really is.

Chapter 1

# A Healthy Mind

There is no lack of advice on how to be healthy. New diets and workout regimes promise us instant health and a never-ending stream of 'superfoods' purport to cure all ills. Yoga with goats is actually a thing, with classes available from Oregon to Amsterdam.[1]

However, the challenges to an understanding of healthy living are not just these spurious fads. Frankly, people deserve to be confused if they think that spirulina, chia seeds, goji berries and activated almonds are all they need to be healthy. It's not even just about the latest dietary evil picked out by tabloid headlines, twisting serious research to play to our sense that the world has gone mad: 'Now baby food and biscuits are linked to cancer', sighs the UK's *Daily Mail*.[2]

No, there are also shifts to official guidelines, as we continually learn more about how our bodies work. As recently as 2005, US dietary guidelines were almost exclusively focused on reducing total fat consumption, with no distinction made between saturated and unsaturated fats. In the current guidelines, Americans are warned for the first time that they are 'eating and drinking too much added

sugar'. The same applies to physical activity, with an array of different guidelines over time and around the world on how often, for how long and at what intensity we should exercise.

There are libraries full of well-researched books, few of which fully agree with each other, because the facts are necessarily complex, uncertain and shifting. It's nearly impossible to isolate the effect of individual nutrients on the body, and diet and exercise also affect people differently – genetics influence how we metabolize the foods we eat. More basically, much of the data about diet is flawed: as we'll see, controlling and measuring what people actually eat (as opposed to what they say they eat) is very difficult.

It's the same, or worse, with happiness, with endless serious and spurious studies showing what's *really* important in achieving life satisfaction. One thing that does seem to be clear is that health and happiness are connected, more so than we're often aware. A study in the UK showed that eliminating depression and anxiety would reduce misery by 20 per cent, compared to just 5 per cent if policy-makers managed to eliminate poverty.[3]

It's little wonder, then, that people are confused, as responses to our surveys clearly show. Our misperceptions paint a picture of denial and self-delusion, combined with a dangerous focus on eye-catching scare stories.

## Food for Thought

Identifying misperceptions about our health is important. Doing so forces us to look at the realities of how we take care of ourselves and, in many cases, the actual health statistics

are shocking. This is especially true when it comes to our weight and diet.

Across the thirty-three countries we surveyed in one particular study, an average of 57 per cent of adults were overweight or obese. That is truly terrifying when you stop to think about it – that nearly six in every ten people are heavier than the medical profession says they should be for their own health.

In the US, 66 per cent of the population is overweight or obese; in the UK, the figure is 62 per cent. In Saudi Arabia, the proportion is even higher, at 71 per cent. Only two countries in Western Europe – France and the Netherlands – can boast that under half of their population are overweight or obese, but they aren't exactly models of health, since the proportion in each is 49 per cent.

As important for our purposes, people in each of these countries greatly underestimated the percentage of people who are struggling to maintain a healthy weight. Saudi Arabia is an extreme example of denial: Saudis believed that only 28 per cent of people in their country were overweight or obese. People in Turkey, Israel and Russia all on average guessed that the proportion of overweight or obese people was about half the actual level. Of the countries surveyed, only three (India, Japan and China) overestimated how many people were overweight or obese, and only one (South Korea) got it right.

How can so many of us get it so wrong about one of the most basic elements of our health? There are a number of explanations.

First, the definition of being ‘overweight’ or ‘obese’ is not immediately intuitive. These terms refer to classifications according to the Body Mass Index (BMI), which was developed in the mid-1800s, and is calculated by dividing our weight in kilograms by our height in metres squared. It’s a simple calculation, yet it’s not one many of us can do in our heads. The number is mostly a collective shorthand for comparing populations or is used in a clinical setting to raise the issue of diet with a patient. The dividing line between ‘normal’, ‘overweight’ and ‘obese’ is also somewhat fluid: the Hospital Authority of Hong Kong, for instance, says that patients with a BMI of 23–25 are overweight, while in the US, UK and EU they would be classified as normal.[4]

**Q. Out of every 100 people aged 20 years or over in your country, how many do you think are either overweight or obese?**

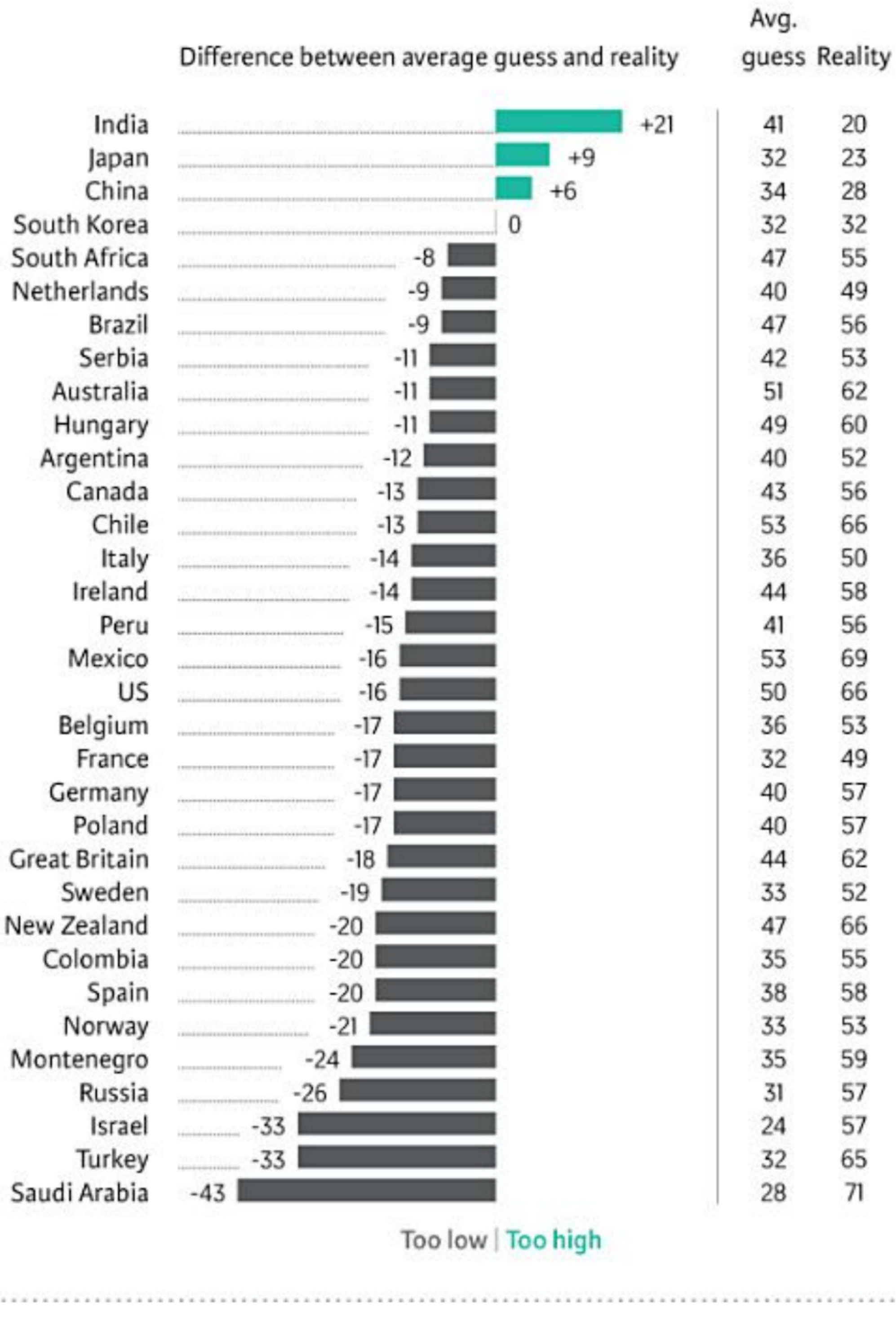


**Figure 2.** On the whole, people greatly underestimated the

percentage of people who are either overweight or obese.

A study across 195 countries showed there were about 4 million extra deaths associated with being overweight or obese globally in 2015 – nearly 7 per cent of all deaths that year.[5] In total, 120 million disability-adjusted life years (the number of years lost or lived with disability) were lost to being too fat. But the crucial point is that nearly *half* of those years lost were due to being overweight, *not* obese.

It could be that some people in the survey were only thinking of obesity when they estimated the number of people in their country who were overweight or obese. This is sometimes the figure that the media focus on, and will be what some people will be familiar with. In several countries, the estimates do seem to split the difference: for example, the 50 per cent average guess for the US population is exactly halfway between the actual figures for overweight and obese combined (66 per cent) and obese alone (33 per cent).

This is just one example of a wider set of explanations for why we're so often completely wrong, that reflect engrained biases in how we think. When asked to make judgements of these sorts, we rely on what behavioural scientists call the 'availability heuristic', a mental shortcut whereby we reach for information that's readily available, even if it doesn't quite fit the situation or give us the full picture. The availability heuristic was described by behavioural psychologists Daniel Kahneman and Amos Tversky in 1973. In their classic experiment, they asked people to listen to a list of names and then recall whether there were more men or

women on the list. Some people in the experiment were read a list of famous men and less famous women, while others were read the opposite. Afterwards, when quizzed by the researchers, individuals were more likely to say that there were more of the gender from the group with more famous names. Later researchers have linked this effect to how easily people could retrieve information: we tend to over-rely on what we can remember easily when coming to decisions or judgements.[6]

When it comes to weight, we reach for similarly ready benchmarks, generalizing from a faulty image of ourselves, and drawing on what we've observed about those around us. And we really do have a very faulty image of ourselves. In a study in the UK, for example, only one in five men with grade 1 obesity – the lowest level, with a BMI of 30–34.9 – classified themselves as obese. More shockingly, only 42 per cent of those with grade 2 or 3 obesity – sometimes called 'severe' or 'morbid' obesity, with a BMI of 35 or more – considered themselves to be obese. To give you an idea of how far in denial the other six in ten were, a 5-foot-10-inch (1.8-metre) man would need to be *at least* 17 stone (108 kilograms) to have a BMI this high. To the extent that people use themselves as the benchmark to judge others by, it's no wonder they underestimate the general problem.

As physician Nicholas Christakis and political scientist James Fowler have shown in their research, people also tend to surround themselves with people like themselves and, over time, they tend to mimic each other's behaviour – including around activities like eating and exercising.[7] Social norms get

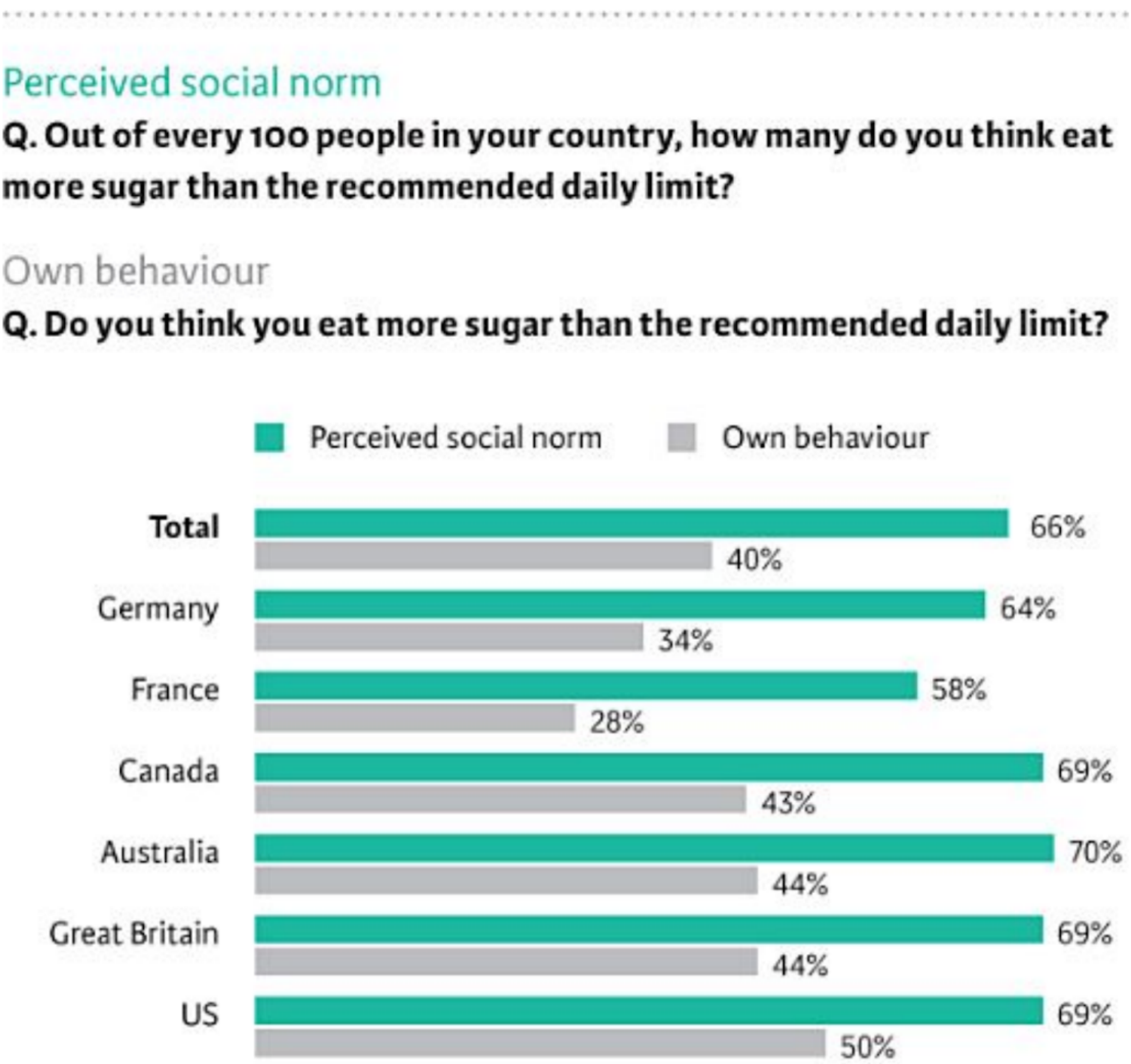


**Figure 3.** In every country there is a gap between our average guess at how many other people eat too much sugar (the perceived social norm of sugar consumption) and what we admit to ourselves (own behaviour).

There was a very similar pattern internationally on tax avoidance: Americans were the most likely to hold their hands up to that personally (14 per cent said they had avoided paying taxes in the last year), while the French again had the biggest gap between what they would admit to personally and what they said other French people do. The Germans were more likely to be sticklers for the rules, but