



PHOTOGRAPHED FOR NEW SCIENTIST BY MARTINA DOLFFSSON

Food fighter

Marion Nestle has been fighting food industry giants for decades. Now, she tells **Catherine de Lange**, she wants to expose the way they skew scientific research

I HAVE been in the US for less than 24 hours when, against my better judgement, I decide to indulge in a food trend I have heard about from the other side of the pond: ice cream so low in calories that the marketing message encourages you to eat the whole tub in one go.

For an ice cream addict, the promise was irresistible. Still, I know bingeing on any junk food – however low in calories – is unwise, and when I arrive at New York University to meet with Marion Nestle a few days later, I am unsure whether to mention my transgression. After all, as the doyenne of nutritional science, she has spent much of her career taking on the food industry and its unhealthy messages.

Trained in microbiology, Nestle was **➤**

working at Brandeis University in Massachusetts when she was handed a nutrition class to teach. That was in the 1970s, and so little was known about nutrition that each textbook she consulted had a different list of nutritional requirements for the human body.

She quickly fell in love with teaching such a poorly understood subject because, she says, the research was so weak that her students had to think critically. “I thought it would be a wonderful way to teach biology. And it was.”

Nestle went on to become a policy adviser for the US department of health, where the connection between food and politics became increasingly apparent to her – if not to others. “Most people think of the food industry as an industry that brings us things we like to eat. And there were companies that are iconic and represent America, and I don’t think anybody really thought about it.”

That changed when obesity began to loom large over the US population. “By the late 1990s I was really tired of going to meetings on obesity and have everybody blame childhood obesity on the parents,” she says. Around the same time, she was inspired by a talk on the behavioural causes of cancer. It focused on cigarette advertising that targeted young people – something that had been considered a normal part of the landscape. “I had never seen it presented as it was at this conference,” she recalls. “Slide after slide of cigarette advertisements clearly directed at children. And I walked out of that meeting thinking: we ought to do this for Coca-Cola.”

So she started gathering material, and what followed was Nestle’s first book, *Food Politics*, in 2002, on the effect of food industry advertising on our health. Since then, she has published seven more on issues ranging from calories to pet food to the drinks industry.

“I was tired of everybody blaming childhood obesity on the parents”

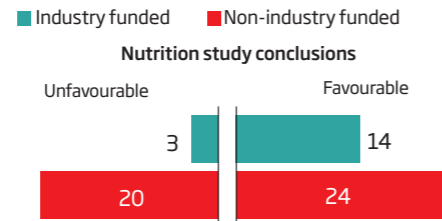
When I meet her in her office, Nestle has just returned from a meeting about her latest book. The subject takes her back to food politics – this time how industry funding of research can skew the findings, and the effect that has on public health (see graphs, above).

As we talk, sitting at a table in one corner of her bright, quirky office, Nestle leans back in her chair, arms crossed. She has a friendly but no-nonsense air about her. You get a sense that she’s seen it all before.

But when I ask her how it is that well-respected

Finding favour

When industry funds research into food and health, the results are more likely to come out in its favour



SOURCE: PLOS MEDICINE. doi.org/gbbz5x

A link between obesity and soda consumption rarely appears in industry-funded studies



SOURCE: PLOS MEDICINE. doi.org/gbmtz7

scientists end up publishing research that pushes unhealthy messages for the food industry, she jumps up. “It’s complicated,” she says, going over to her desk and picking up a sheet of paper. “I just got a letter today. I’ll read it to you. It’s wonderful.” The letter is a call for applications for funding. “‘Letters of intent are sought for \$35,000 grants on research on any relevant health issue in which grape consumption may have a beneficial effect,’” she reads.

“How’s that?” Nestle asks, slapping the letter down on the table. “You don’t get clearer than that. So here I am. I’m a junior professor, I need to bring in grants, I need to publish. Well, I think it would be fun to do a study of what’s in grapes, and feed people grapes, and find out whether people who eat grapes are healthier than people who don’t. And that just came in today,” she adds. “Goes right in the book.” She gets letters like this all the time, “and they are very frank about what they want”.

Her book will include four chapters of case studies where industry funding affects research results and the health of the public. One of them is on sweets, “because the confectionery industry and the chocolate industry: holy smokes,” she says. Over the past three decades, big chocolate has poured millions of dollars into research. The result has been a steady stream of media stories on the beneficial effects of the flavanols found in cocoa for the heart and brain, how dark chocolate can improve memory, and so on.

Meat, dairy and eggs get a chapter, as do

healthy foods, like the so-called superfoods blueberries and pomegranates. Then there is a whole chapter on Coca-Cola, not because the company is unique but because there is a lot more information about it, says Nestle, “because of the emails”.

She is referring to leaked emails about the relationship between the drinks giant and the Global Energy Balance Network, a US not-for-profit researching the obesity epidemic, but which, against the grain of much of the evidence, pushed the message that exercise, not diet, was the key to weight loss. Coca-Cola donated \$1.5 million to the organisation, but claimed to have no other involvement – until emails leaked in 2015 showed otherwise. The network shut down soon after.

I wonder how hard it is for one professor to take on industry Goliaths. Mainly, she says, it is hard to get her work accepted in journals. “If it names companies or individuals, nobody wants to publish... on the flip side, you have scientists getting paid by the food industry having no problem getting published.”

It is clear Nestle approaches all this with a light touch. You know you have found her office thanks to a string of toy fruit and vegetables dangling by the door. As well as awards for her work and shelves of books, the interior is decorated with memorabilia from the industries she is pitting her wits against. There is a Coca-Cola hat, vehicles made of drinks cans, and a giant Starbucks mug. Perched high up is a vintage toy set of McDonald’s food. “I have a lot of toys,” she says.

Look who’s paying

But her sense of humour has been put to the test recently, after a blog post criticising a film about genetically modified organisms received over a thousand comments. When I ask her about it, she looks weary. “They were nasty,” she says, “and I thought: really? I don’t need to do this.” So she disabled comments on her blog. Does the trolling bother her? You have to have a thick skin, she says, “otherwise you don’t play in this game. I mean, it’s politics. I don’t take it personally – which isn’t to say I don’t notice it.”

Who is she doing all this for? The new book is partly for her colleagues. “My field is not nearly conscious enough of this issue,” Nestle says. It is also aimed at the general public. And the media: “If they see a research study with an implausible but headline-getting result, look and see who paid for it.”

In fact, this was one of her main motivations.



SWEET STUDIES

To boost performance on a memory test you would need to eat

500g
dark chocolate
per day

ACCORDING TO ONE STUDY (NATURE NEUROSCIENCE, DOI:10.1038/NN3850) AND BASED ON THE AVERAGE FLAVANOL CONTENT OF 12 BRANDS OF DARK CHOCOLATE (J. AGRIC. FOOD CHEM. DOI:10.1021/JF201398T)

In 2015, Nestle was quoted in an article in *The New York Times* about the leaked emails. She got about 30 calls from reporters in the week afterwards. They were shocked. “They could not believe that Coca-Cola would fund research that’s self-serving. They could not believe that academics at respectable institutions would accept Coca-Cola money for such a purpose, and they couldn’t believe that the universities would allow their faculty to do that. So I thought – these are reporters, and they don’t know?” she says indignantly. “They have no idea how this system works. I’ve got another book.”

I think back to all the times *New Scientist* has run articles about the benefits of chocolate or the odd glass of wine. Often the research is sound. But if you eat a bar of chocolate you are mostly eating sugar and

fat, even if you are taking in flavanols too.

Should there be a ban on industry funding? Not necessarily, Nestle says, but reviews of research funded by big pharma show that even when scientists think they are being objective, their studies usually produce results favouring the sponsor. Even Nestle believes that the science itself is usually fine, but bias creeps in thanks to the initial research agenda, and because of the way the results are interpreted and marketed. So, she says, if scientists are going to do this kind of work, they need to figure out how to put up a firewall, so the funders aren’t so closely tied to the results.

Without that barrier, interpretations get pushed that aren’t just misleading, but also erode the public’s trust, Nestle says. “I can’t tell you how many people I hear from who say ‘I just don’t know what to eat.’” Yet, as Nestle points out, basic food advice has remained the same for decades. “If the public is confused it’s because it’s way more fun to argue about fat

“Food is pushed at people in such an overwhelming way and it’s done so skilfully”

and sugar than it is to talk about dietary and lifestyle patterns as a whole.”

This reminds me of the mixed messages on my tub of low-calorie ice cream – that it is so healthy you can overeat. When I mention it to Nestle, her face lights up. “There was a pop-up store in the neighbourhood here that was selling raw cookie dough.” Intrigued, she tried some. “It was just weird. It wasn’t that good. And one day I walked by and there was a line a block long for this place. They were buying it in tubs!” She seems horrified, so I ask whether she thinks our relationship with food is broken. “I think a lot of people have a very disordered relationship with food but that’s because it’s pushed at people in such an overwhelming way and it’s done so skilfully,” she says.

Has her work had an influence on how she eats? “No,” she says. “I’ve always liked vegetables, so I’ve never had a problem with that. I love to eat, I eat what I like, I just try not to eat too much.”

That message might not have the allure of headlines telling us it is a good idea to consume chocolate and red wine. But if there is one thing Nestle’s work tells us it is that if it sounds too good to be true, it probably is. Sin-free ice cream included. ■

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