by about three-fold in the first three months after leaving.

The population faced huge societal dislocation, and many people died – but the loss of life was down to a natural disaster and our response to a human-made one, not the nuclear accident. So deep is distrust that just one of Japan's 43 reactors has restarted since the shutdown of all its plants.

We should learn from the accident to ensure we don't repeat mistakes. But we must also recognise that an overreaction can produce health risks greater than those of the incident itself.

An inability to keep cool in summer and warm in winter takes a toll on older people, and climate change will affect us all. Societies may have to accept that the health risks of a very rare nuclear power accident are a lot smaller than we allowed ourselves to believe.

If we don't take note of the lessons on risk communication from Fukushima, public mistrust of nuclear power may lead to it being marginalised, despite its potential for powering our future. That would have a much more detrimental effect on the health of future generations.

Geraldine Thomas is a professor of molecular pathology at Imperial College London

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refined carbs, sugars and salt; and away from healthy higher-fat foods such as nuts, vegetable oils and whole-fat dairy products.

By focusing on total fat, dietary guidelines, policies and food formulations have at times become bizarre and paradoxical. Let's remove this obsolete limit and focus instead on healthy wholefoods and diet patterns.

Dariush Mozaffarian is dean of the Friedman School of Nutrition Science & Policy, Tufts University, Massachusetts; David Ludwig directs the New Balance Foundation Obesity Prevention Center in Boston and is author of forthcoming book *Always Hungry?* (Grand Central)

ONE MINUTE INTERVIEW

Let AI solve your disputes

There's too much talk of Terminators and too little of how artificial intelligence can create fairer societies, says **Ariel Procaccia**

PROFILE

Ariel Procaccia is a computer scientist at Carnegie Mellon University in Pittsburgh, Pennsylvania. He has worked on a variety of "AI fairness" projects, including Spliddit.org

Can AI solve human disagreements?
That's the ideal. In situations where there are disputes or arguments we would want AI to be able to give us intelligent proposals in an automated way. One approach is to base these proposals on principles of economic theory.

How does economic theory help?
The main question here is what is fair. We want a rigorous definition of fairness that the computer can understand. That's where economic theory comes in, because a lot of work has been done on how to formalise, in mathematical terms, what fairness means and then design algorithms that can provably achieve those notions of fairness.

What sort of problems can this tackle?
Maybe the most intuitive example is rent division. Think about a situation where there are a few flatmates renting an apartment together and they have assigned the rooms but now have to divide the rent. The rooms are different – one is larger, one has a nicer view and so on. The algorithm can be informed about the preferences of each flatmate by getting them to value the rooms and then incorporating their valuations into a final calculation. The outcome we're shooting for is a very compelling property called envy freeness – we don't want anybody to be envious of anybody else.

Is that why you set up a website – to give people the opportunity to try out AI like this?
Yes. In November 2014 we launched Spliddit.org, which helps people fairly divide up goods, rent, bills in restaurants and fares on transport, among other things.

Are you looking beyond these simple scenarios?
With dispute-resolution cases, you can go from simple right up to things like the dispute between the Israelis and the Palestinians. But at all of these levels, I think AI in collaboration with economics could ultimately give pretty good proposals for what outcomes will best satisfy the parties involved. We still have a lot of work to do, however.

So in the future, will AI be making all of our decisions for us?
I think we're far away from the point where AI will completely take over decision-making. The goal right now for this type of application is definitely not to replace human negotiators with robots, negotiating on their behalf, but more along the lines of AI and humans working in tandem.

Some, such as Stephen Hawking, worry that abilities like this could make AI too powerful. Are you afraid?
I knew this question was coming! It's funny, because I just came from a conference on AI in Argentina, where there was a lot of discussion of killer robots. I'm not an expert in robotics or general AI, but the point I do want to make is I think there's too much attention given to killer robots and not enough to the benefits that AI has for society right now. We could talk about those a bit more and Terminators a bit less.

Interview by Chris Baraniuk