

The most important living psychologist?

...That's according to Steven Pinker. Lance Workman interviews **Daniel Kahneman**, Nobel laureate and co-creator of behavioural economics

You've had a very eventful life and you've witnessed both extreme kindness and cruelty that most people have only read about – I'm wondering what got you interested in psychology, in people. Was it the positive events you witnessed or the negative ones?

I don't think it was either the positive or the negative. I trace my interest in psychology back to my mother and her interest in gossip. There was always a lot of talk about people in my childhood and I resonated to it. I think that's where my interest in other people, started – really from a very early age I realised that people are complex and not always easy to predict.

You did your doctoral work at Berkeley in the 1950s – there must have been some very prestigious academics at Berkeley to rub shoulders with back then?

Yes, there were some very interesting people at Berkeley back then, but I wouldn't say I was particularly influenced by any of the greats. Tolman had already left, and I studied with people whose names are well-known like Jack Block who taught me a fair bit about personality testing. But basically I wasn't anybody's student when I was at Berkeley. So no great influences in my life at that point.

You've worked on an astonishingly large number of psychological areas – from memory to vision, from pain to well-being – but you are probably most associated in people's minds with the discovery that

judgement heuristics can lead to errors. Why did you decide to study this?

It was in part an accident for which life had prepared me. The accident was that I was teaching a graduate seminar on real-world problems and as a part of this the person I ended up collaborating with, Amos



Tversky, happened to give a talk about what was going on in his field of judgement and decision-making. I didn't actually agree with what he said in his talk, and afterwards we started discussing it. I think I shook his view that we are all 'conservative Bayesians' – that is that when people make false judgements, after feedback, they adjust their confidence intervals in the right direction but not far enough. To me this just wasn't how people made judgement heuristics. What occurred to me was that a number of things were coming together. I had always

been curious about my own errors of judgement, and as I was teaching statistics I was very curious about what the students found intuitive and non-intuitive in the statistics I taught them. Also I was studying perception. So what we did was to put all this together with Amos' interest in the area and began working together.

You mention Amos Tversky. Your names are like Lennon and McCartney – you seem to be somehow more than the sum of your individual parts. Is that a fair assumption?

Yes, I think it certainly is true for both of us that the work we did together was better than the work we did separately. I think both of us did decent work separately but the work we did together had something special that came from the combination of our talents and the way we worked together.

Tversky is sadly no longer with us. What sort of a man was he?

Well to paraphrase my eulogy, Amos was a man who made a great deal of difference to many people's lives. My first memory of him was as a thin and handsome young lieutenant back in 1957. He had recently received the highest citation available from the Israeli army for saving a man's life and injuring himself in doing so. So he was certainly a man of courage. He was intelligent and witty and was always able to move things on as a collaborator. In terms of working with him, almost everything we wrote together went through dozens of drafts. That was how we worked, and what kept me going in this way was Amos' 'let's do it right' attitude. And he was right – they always did improve through reworking. The article we wrote on heuristics and biases for *Science* in 1974 took literally a year to write. Sometimes we would write only one or two sentences in a day – but we knew it was right by the time we submitted it, and I think we brought out the best in each other.

Amos was not a man you could coerce or embarrass into chores or empty rituals. This gave him a great sense of freedom that many people would envy. I think it was this sense of freedom and a sharp intellect that gave him the ability to adapt creatively to problems. I think it's also worth mentioning in terms of his standing in psychology that he published more articles in *Psychological Review* than any other psychologist – and has yet to be surpassed.

You've probably been asked this many times, but how did you hear you'd won the Nobel Prize and how did you feel? Well, they call you. Often people know in advance if they think they are candidates – there are lots of people waiting for that

phone call. It's a closely kept secret, but some people know that they are being 'activated' soon. It's funny... the person who called me said something to reassure me that this was not a prank. I forget exactly how he managed to convince me that it wasn't a prank, but the Swedish accent certainly helped!

Did people start to treat you differently?
Yes I think they did. There is an aura that surrounds the Nobel Prize that comes from its history. The funny thing is... and I won't say it's not a great honour, it is... but it is not the most selective honour.

It's not?
No, it really isn't – you know in economics they get three a year. In psychology, the American Psychological Association award is actually more difficult. The Nobel is definitely not the most selective – but it does carry a certain cachet that the others can't quite match.

The thing is, there are no Nobel prizes for psychology. If there were, you would have 50 people alive today with them.

That's interesting, because you won it for economics. You had to publish in economic journals to get it?

That's not the reason. One gets the Nobel Prize for economics if your work has been influential enough in economics – it's not so much they judge the quality of the work so much as they value its influence.

I didn't mean that you targeted for the Nobel prize, by publishing in economic journals, but that it happened to work that way around.

No I realise that – I'm just saying that the reason we got it was because behavioural economics, which brought psychology and economics together, happened at that time and we were heavily involved in developing it.

Were economists happy about a pair of psychologists coming into their field, publishing in it and winning the big prize?

Maybe some were unhappy that we got it as we weren't economists – but as I was involved in the development of behavioural economics and this has taken off since and helped to add a dimension to economics, I think most were OK about it. In the 1980s there was a feeling that psychology was influencing economic thought – so they could see that we were bringing something new into the field.

You've demonstrated that people are rather poor at making decisions that involve some degree of uncertainty – and

yet you don't see people as irrational?
Well, I think the whole issue of whether people are rational or irrational depends on your definition of rationality. What you find is that there is a definition of rationality that is accepted in economics and if you stick to that definition then people are definitely not rational – it's all about economic decision-making. Of course that does not mean that they are crazy, as this is quite different to what being rational means in everyday language.

One way out of this 'why do we make bad decisions under some circumstances?' debate is by introducing a dual-process model. This is based on work I did with Shane Frederick, and the model assumes that there are two ways in which decisions are produced. System 1 is very rapid, automatic, effortless and intuitive. System 2 is slower, rule-governed, deliberate and effortful. System 2 sometimes intervenes on behalf of System 1 as it 'knows' the latter is prone to violate certain rules. This means that we are likely to make errors when System 2 fails to correct System 1. That's when we appear to act irrationally at times. We have a very rational system available – but it isn't always engaged.

You have done a lot of work on cognitive illusions. One of the terms you coined in this area is the 'illusion of validity'. How did you come up with this concept?
I coined the term 'the illusion of validity' when I was 20, but it didn't make it into the literature until 1973 when we published a paper on the psychology of prediction. It's really about the fact that when we are making predictions often there is no real connection between statistical information and our experiences of insight. We think there should be a close connection between these two forms of evidence – but often there isn't.

One of your more recent areas of interest is something you call adversarial collaboration – it sounds intriguing. What does it involve?

I think that there is a lot of controversy in psychology – perhaps not as much as in some other fields – but in general by the time you get into the cycle of 'critique' followed by 'replies' and 'rejoinders' in journals, you are really wasting your time and energy. People get intensely involved in them. They become emotionally wound up – but usually you find it yields absolutely nothing, with neither side changing their minds about anything or agreeing that they got anything wrong. And so I would very much like to see the reply and rejoinder way of dealing with debates disappear. I think that it could happen.

So people that disagree might write a paper together where they write different parts – is that how it works?

Yes, that's right, and I have participated in several efforts of this kind. In one of them we had a mediator, Barbara Mellers, and we proposed rules for adversarial collaboration. Perhaps the most successful one was a collaboration with two authors who had criticised my work, Dan Ariely and George Loewenstein. We started by seeing what we agreed on and then explained what we disagreed on, in successive paragraphs that we wrote separately. The paper came out in two voices. I think it worked quite well, and it certainly led us to listen to each other more carefully and calmed the anger that is normal under such circumstances.

I think academia would be a better place and with a little less ego if we all followed your lead on this! Finally, you're working on well-being now. What can we do to boost our well-being?

I can think of three things. First, change the way you use your time. Time is the ultimate finite resource – we should use it as if it is. Second, try to pay attention to the things that make your life better rather than concentrating on the things that make your life worse. And the third I think is to invest your time on activities that you will continue to pay attention to. For example when people buy a car they imagine themselves driving the car and enjoying it. But most of the time when you actually own the car and are driving it you're not attending to it. However, when you are socialising with friends you are attending to that activity. So there are activities that are attention-rich intrinsically. If there are good activities that are attention rich you should work on them – you should try to have a lot of them in your life. I think people don't do that enough.

reading

Links to some publications are available at www.princeton.edu/~kahneman

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