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# RSIS COMMENTARIES

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## **Iran's Nuclear Behaviour: A Behavioural Science Perspective**

By Teo Cheng Hang

### **Synopsis**

*With no agreement in sight between the international community and Iran on its nuclear programme and time running out on a peaceful resolution to the issue, behavioural science can lend useful insights to better understand the choices made by key decision-makers and inform the deliberation of policymakers.*

### **Commentary**

TIME IS running out on a peaceful resolution to Iran's nuclear issue, with no agreement in sight between the international community and Iran on its nuclear programme and Israel agitating for military action. Amid this pressing environment behavioural science can lend useful insights to better understand the choices made by key decision-makers and to inform the deliberations and responses of policymakers.

Behavioural scientists have identified two related phenomena in this regard – loss aversion and risk aversion. Loss aversion, first raised in a 1979 study by Daniel Kahneman and Amos Tversky, refers to the phenomenon whereby people prefer avoiding losses to winning gains of similar magnitude. The tendency to avert losses means that convincing Tehran's policymakers to disarm after acquiring a nuclear weapon would constitute a more difficult task than preventing them from acquiring a nuclear weapon in the first place.

### **Encouraging risk aversion or risk seeking?**

It is instructive that with the sole exception of South Africa, no country has ever given up nuclear weapons after having developed them. This is consistent with the endowment effect, in which one values a good that one owns more than the same good that one does not own; as well as the status quo bias, in which decision-makers disproportionately tend to adhere to the status quo alternative.

In the same study, Kahneman and Tversky also discussed how we are psychologically predisposed to risk aversion in the domain of gains and risk seeking in the domain of losses. Through this lens, does the international community want to induce in Iran's leaders a risk-averse or a risk-seeking mentality? It follows that the various punitive sanctions that have been imposed on Iran may well have the undesired effect of making them more risk-seeking.

After the February 2013 talks in Kazakhstan, a group of lawmakers in Washington announced new legislation to tighten United States sanctions on Iran. The US and the international community should exercise caution in

imposing sanctions to avoid increasing the risk-seeking behaviour that this is likely to generate in Tehran.

The same psychological disposition of risk aversion may also inform the way the international community's policymakers frame the tradeoffs for Iran's decision-makers. With a greater aversion to a loss than a propensity for the same magnitude of gains, it might be more effective for future concessions to be framed as "it's yours, but you lose it if you violate the terms of the agreement" rather than "it's yours, if you follow the terms".

### **Behavioural science explanation of Iran's nuclear desire**

In looking at how behavioural science explains Iran's desire for a nuclear programme, the ultimatum game shows the lengths that actors go, even to the detriment of their own wellbeing, to enforce a sense of fairness. Fairness is one of the justifications Iran uses in support of its nuclear programme – it has consistently claimed its right under the Nuclear Non-Proliferation Treaty (NPT) to enrich uranium for civilian purposes. And if it were seeking nuclear weapons, fairness would certainly be a key rationale, given that Israel is the sole possessor of nuclear weapons in the Middle East.

The notion of fairness has further implications. There is little doubt that if Iran does acquire nuclear capabilities, its adversaries in the region would clamour for the same, in the name of their own security and nuclear parity. Like the price-taker in the ultimatum game, other actors in the region might act punitively – perhaps even against their own self-interest – in the name of fairness. In considering its own nuclear programme, Tehran would do well to take note of the volatility it would bring about in its neighbourhood.

It cannot discount the possibility of its own acquisition causing the proliferation of nuclear weapons throughout the region or other dangerous retaliatory responses on the part of other regional players.

### **'More may be better'**

Political commentators such as Kenneth Waltz have suggested that nuclear weapons foster stability, and that "more may be better". Not so when behavioural science finds that decision-makers committed to a course of action tend to continue this commitment beyond the bounds of rationality. More nuclear weapons just means that more cool heads – those that recognise and are able to act against this natural tendency to escalate - are needed to limit nuclear escalation. Unfortunately, it also means a lower threshold for strategic nuclear over-escalation.

Making a rare venture into international politics, Kahneman, a psychologist by vocation, in 2006 explained in *Foreign Policy* from a behavioural science perspective why hawks tend to dominate the doves in decision-making. Even if this will not put an end to the world's crises, he expressed hope that understanding the biases in decision-making would at least level the playing field between the hawks and the doves.

On the Iran nuclear issue I echo an analogous hope that behavioural science can at least nudge policymakers to great understanding of Iran's decision-making, and ultimately to better-informed responses and policies.

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