Brexit, Trump and the Nash Trap. A Loss of Trust.

By Greg Rooney

The U.K.'s decision to leave the EU and the voting in of the protectionist Donald Trump to the US presidency has drawn both the UK and the USA into the Nash Trap.

U.S. mathematician John Nash (the movie 'A Beautiful Mind') postulated that Adam Smith's declaration that *'In competition, individual ambition serves the common good'* (the leave approach and Trump's 'America First' proposition) was incomplete.

Instead Nash postulated that the best result is for everyone in the group doing what's best for himself AND the group (the remain in the EU and the international free trade approach). This variation of Adam Smith's dictum has became known as the Nash Equilibrium and won Nash a share of the Nobel Prize for Economic Sciences.

The decision by the UK to act independently in an attempt to maximise its own self-interest (defecting) will lead to an EU response of also defecting. Trump's attempt to maximise America's own self-interest will quickly lead to the rest of the world retaliating. Self-interest then dominates relationships in a way that makes cooperation difficult to maintain. They become inherently unstable relationships because there is no real consideration for the other party. Therein lies the trap.

Nash postulated that this trap was lying in wait for every situation of competition and conflict in which parties are unwilling or unable to communicate and collaborate. Any action to escape the Nash trap must involve some consideration of the other party.

Mediators face parties caught in the Nash trap every time they mediate. This leads to the classic mediator intervention, *"As I look around the room I cannot see any winners here. Everyone here is a loser in some form".* It often starts with an adversarial lawyer issuing a threatening letter of demand to commence a claim. This provokes an in-kind response and the trap is laid. The trap can also be seen in the ever increasing legal costs and who is going to be liable for them.

The point of the Nash Equilibrium is that the choices you make should depend on what everyone else does. Thus, each strategy in a Nash Equilibrium is a best response to all other strategies in that equilibrium.

> *"Cooperation would lead to the best overall outcome in all … cases, but Nash's Trap draws us by the logic of our own self-interest into a situation in which at least one of the parties fares worse but from which they can't escape without faring worse still. That is why it is such an effective trap. If we are to learn to cooperate more effectively, we need to find ways to avoid or escape from the trap."* (Fisher 2008)

The Nash equilibrium is defined as a self enforcing agreement, that is, an agreement that once reached by the parties does not need any external means of enforcement because it is in the self-interest of each party to follow the agreement if the others do. It holds because

there cannot be any gain by independent action on either side's part. When parties are at a Nash Equilibrium they have no desire to move because they will be worse off if they do. Therefore there is no need for a trusted authority, like the judicial system, to sustain them. Their state of equilibrium makes them sustainable.

Trust is at the heart of the Nash equilibrium. It underpins the incentive for all parties to be transparent in their strategies to the point that no party will want to change their strategy in response to what the others are doing.

Blockchain protocols are a digital version of a Nash equilibrium created through trust in a secure software platform. Bitcoin is an application of the Nash equilibrium via the use of trusted code which replaces an external trusted authority. Other Nash equilibria include the Australian version of Project Allianceing used in the oil and gas and construction industry where equilibrium is established by the parties being precluded from suing each other for negligence or fault (Rooney 2009). Uber and AirB&B achieve their Nash equilibrium through an instant and transparent rating system that weeds out untrusted users and providers. The Nash equilibrium could well be called the trust equilibrium.

The Nash Equilibrium has helped economists and social scientists understand how decisions that are good for the individual can be terrible for the group. This is because the benefit that people gain in society depends on people cooperating and implicitly trusting one another to act in a manner corresponding with cooperation. The Nash Equilibrium is, in its essence, the general formulation of this assumption.

It is also a basic principle of game theory. Nash's theory is designed to work in a non-cooperative game in which each player makes a decision independently of the others.

Lyndsey Browning looked at cooperation and the question as to why it has evolved in the animal kingdom and why it has underpinned the success of human society. If the fittest always survived then why would any living thing want to cooperate? She looked for answers in game theory particularly the prisoner's dilemma or the XY game. A worldwide competition was won by Anatol Rapoport whose winning strategy was dubbed 'tit-for-tat' (McTaggart 2011).

Rapoport's approach was tested many times in different games and always won - always start by being cooperative but return defection for defection and cooperation for cooperation. Nonetheless be forgiving and fair and don't go on punishing more than once after a defection.

It is clear from research into game theory that the only way out of the Nash trap is through some form of cooperation, magnanimity and forgiveness. The earlier this takes place the quicker is the escape from the Nash trap. This approach to working with an external group opens the door to the concept of reciprocity or sense of fair play and works as a bridge or pathway towards sustained collaboration.

From a mediation perspective the Nash equilibrium has relevance to the issue of the comparative benefits of facilitative mediators who work with parties in a joint session and

mediators who adopt a command and control mediation model allowing no meaningful contact between the parties (Rooney 2016).

The facilitative mediation model, in encouraging parties to interact with each other, provides the opportunity for all parties' strategies to become known as the session progresses. This creates the opportunity for strategic concessions to be made face-to-face allowing an instant and transparent assessment of the best response to all other strategies. It is also the first step towards engendering trust and cooperation through the power of human connection (Rooney and Ross 2012).

For alpha mediators who use a fully shuttle or caucus mediation model, the opportunity for the emergence of transparent strategies is greatly reduced. This more directive and advisory approach by the mediator can result in incomplete information being passed between the parties which can have a dramatic effect on predictions about each other's strategies. It also leads to secondary interpretations by the parties about their opponents resulting in a premature convergence of thinking. It involves the ritual use of deception (Cooley 2003) as part of the bargaining process which further hinders trust, cooperation and transparency, the essential elements for creating a Nash equilibrium.

International examples of where a negative equilibrium Nash trap has been reached include the nuclear arms race during the Cold War, Catholics and Protestants in Northern Ireland, Israelis and Palestinians, Sunnis and Shi'ites and the gun control issue in the United States. All involve a catastrophic loss of trust between the parties.

The nuclear arms race, the Northern Ireland troubles and apartheid South Africa all resolved through negotiation facilitated by the granting of concessions as the path to building cooperation and trust. It was through Nelson Mandela inviting General Vilogen, the leader of the far right Volksfront party, to his home and personally serving him a cup of tea that started the process of developing mutual trust that ultimately dismantled apartheid South Africa.

The UK and the USA appear to have abandoned trust for self-interest. This regression, which underpins the rise of Brexit and Trump, is more a reflection that significant sections of their populations want to wind back to a world where they were the dominant culture. That world only exists in their memories. It has been replaced by a collaborative interconnected world built on self-sustaining Nash equilibria that transcend national borders. The command and control political culture that comes with being a global power is passing. Hence the nostalgia for making America, Great Britain and the former Soviet Union great again.

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