ESSAY

THE NEUROECONOMICS OF THE SECOND TRACK: PROCESSES, OUTCOMES AND IMPACT

Peter Fritz AO

Recent research in the fields of neuroscience and behavioural economics offer clues to the success of GAP's Second Track process of productive group collaboration. Entrepreneur and philanthropist Peter Fritz AO explores the ways in which individual and group decision making can be optimised through this approach.

INTRODUCTION

The decision-making bodies that control commercial and public policymaking worldwide tend to be traditional 'first track' groups, with homogeneous participants differentiated by strict hierarchies. Unfortunately, these stereotypical structures tend to enforce an artificial and constricting pattern of human engagement on their participants that does not align with the internal brain processes[1] and group dynamics[2] that evolved in humans and their ancestors over millions of years to promote their survival in a state of nature.

The conflict between contemporary organisational models and the ancient modes of thinking and behaviour tends to suppress the variety and spontaneity of the ideas they generate in favour of safe and acceptable options agreed by rote rather than rational deliberation. Therefore, these bodies churn out yesterday's solutions to contemporary problems without consideration of tomorrow, and these suboptimal decisions can have disastrous consequences for the much greater number of people unknowingly affected by them.

1. Beaty, 2020
2. Bénabou, 2007

The problems – rather than solutions – generated by traditional 'first track' approaches remain unresolved because, until recently, they were unexamined. Fortunately, **neuroeconomic research**, combined with insights from neuroscience, evolutionary biology and psychology, not only aids the understanding of supposedly irrational economic choice-making in society but offers clues to better decision-making frameworks in the future.

Alternative modes of group interaction, including Global Access Partners' Second Track process,[3] can work with the grain of brain chemistry and group dynamics, rather than against them, to produce better results. Notably, the Second Track has a strong record in helping expert individuals from various related sectors escape from the negative 'groupthink'[4] of their respective organisations when they interact as individuals to form a common goal.

Daniel Kahneman's work in behavioural economics[5] explains why individuals in real life make irrational decisions, much to the frustration of classical economists. This helps frame 'nudges' to improve them, so a better understanding of decision-making, reward-seeking and social drives within the brain opens the way for fresh alternatives more in tune with our underlying modes of thinking.

NEUROECONOMICS

Traditional economics is the study of decision making in the production, consumption and transfer of wealth in a world of infinite wants but limited resources. These decisions are assumed to be rational calculations to maximise the value – utility – of transactions for the individuals involved, which, when aggregated, constitute local, national and global economies.

However, the underlying thought processes that drive these decisions have not been analysed until recently[6], in part because the technology required to undertake such investigations did not exist. Neuroscience – the study of the brain and nervous system – is now helping to inform our understanding of human decision making at the most fundamental level, and as human decisions involve the allocation of relative value to alternatives and choosing between them, neuroscience has such direct relevance to economics that both have delivered a new offspring – neuroeconomics.

Researchers in this emerging field use brain imaging technology to record neurological activity generated when people and animals assess options and make decisions (the essence of economics) in controlled conditions. These results are analysed to inform theories regarding the parts of the brain involved in such tasks, and their interactions. Both economists and neuro-economists are interested in variations from the state of equilibrium, be it in a market or a brain, and how individuals and groups perceive, process and act on information.

The complex data generated by neuroeconomic observation, and the neurological hypothesis these inform, offer plausible mechanisms to produce the psychological, cognitive and emotional factors that distort 'rational' economic calculations in behavioural economics. Similarly, DNA – initially discovered by Johann Friedrich Miescher in the 1860s, rather than James Watson and Francis Crick in the 1950s – explains the mechanism driving Darwin and Wallace's theories of evolution by natural selection.

3. Fritz, 2019
4. Fisher, 2021
5. Kahneman, 2011
6. Morse, 2006

Aligning the patterns found in economic decision making with the brain scans produced when such decisions are made helps understand both individual and group decision making, as brains individually and collectively try to maximise their intrinsic reward mechanisms, which may sometimes be at odds with extrinsic calculations of value.

The study of human decision making has been influenced by **game theory** since the Second World War. However, **normative decision theory**, which analyses the outcomes of decisions or determines the best decision to be made in the light of given constraints and assumptions, is increasingly influenced by neurological insights into **descriptive decision theory** – the analysis of how people and groups make the decisions they do. Digging beneath the apparent factors of circumstances, interests and power at play into the more fundamental biological foundations of individual and group decision making should improve the quality of decision making within such groups and the economic outcomes they generate in the world outside.

The human brain remains the most complex and mysterious structure[7] in the known universe, and studying its operation by way of other human brains brings its own set of complications. Until recently, it was impossible to record or analyse the chemical and electrical impulses which code memory or empower thought, and humanity was content to ascribe its workings to supernatural origins or model them through metaphor.

Such metaphors tend to reflect their time. Brains are commonly thought of as computers today, however imperfect, but accepting that homo sapiens is a product of biology and evolution, and that the use of technology does not make us machines widens our scope of understanding to embrace our animal reality.

The invention of highly sophisticated medical imaging technology such as functional magnetic resonance imaging (fMRI) allowed us to investigate the operations of our brains, all of which far pre-date technology. Similarly, accepting the imperfect evolution of humanity from ape-like ancestors eight million years ago helps us understand why human cognition and decision making which evolved to build tribes, hunt animals and evade predators, is ill-served by hidebound committees.

Just as economic orthodoxy embraced behavioural economics[8] after some initial scepticism, it is beginning to accept the validity of input from the new field of neuroeconomics. Similarly, organisational theorists and communication specialists are beginning to integrate the importance of cognitive processes into their advice on decision making and group dynamics.

THE POWER OF THE SECOND TRACK

The Second Track developed from its origins in international diplomacy[9] through more than two decades of practice and experience rather than implementing a prior theory of human communication. Theory of the Second Track is now developing from research into the successes and processes of Second Track engagements. This research is also being informed by the findings of scholars in the fields of neuroscience and neuroeconomics, whose insights will doubtless further hone its approach.[10]

Just as peeling back the surface layers of personal gain and psychological behaviour to investigate the neurological processes which drive them will help economists develop more sophisticated algorithms to predict the real-world consequences of policy decisions, so lessons from the Second Track and neuroscience will help groups arrive at better decision making in the future.

7. Mayfield Brain & Spine, 2021
8. Smets, 2017
9. Diamond and McDonald, 1991
10. Fritz, 2021b

The more we know about life, the more we realise there is more to discover. Just as neuroscience and psychology are uncovering the host of non-economic factors shaping our rational economic decisions, so research into the brain itself reveals that its decisions are produced by a complex interplay of regions and activity, rather than any single, simple driver.

While our actions are driven by fundamental forces and processes, our self-consciousness and intelligence allow us to not only understand them – however imperfectly – but to mould them to better ends more suited to current conditions. Knowledge gives us the power to change if we have the will to do so. 'First track' systems may be traditional, but they are not inevitable. Group dynamics are malleable, just as our brains remain plastic, although the ability of both to change declines with age.

Newly formed groups are more likely to accept novel approaches, just as children are more adept at learning a new language. People in Second Track groups created to investigate a problem are more likely to generate a new solution[11] because they can more easily adopt new ways of thinking, rather than being hidebound by long-standing institutions, even if drawn from established groups[12].

The explicit diversity of Second Track groups – in terms of sectors represented rather than individual experience, expertise or ethnicity – generates a broader range of input for members to consider, for example. Neuroscience suggests that our brains[13] – like our vision – evolved to tune out expected data streams to concentrate on surprises (a rustle in a bush rather than the bushes themselves). Therefore, this more significant variety of unexpected input impels all participants to stop at a visceral level and consider information they would hitherto not have known or view it from a new perspective.

Engagement in 'first track' groups tend to be motivated by economic factors – participants are paid to attend, or attend as part of their jobs, or seek economic advantage for the vested interests they represent. Second Track groups tap into a second, deeper, and a more powerful motivation: the emotional gratification generated in participants' brains when they form new group bonds and pursue a common cause close to their heart.

They may have joined because they felt stifled in their day jobs or seen proposals for change founder in entrenched bureaucracy but will be motivated to new heights of endeavour by the prospect of not only suggesting ideas which would have been impossible in their everyday interactions but driving their implementation themselves.

The importance of social interaction to humans cannot be overemphasised. Solitary confinement is an extreme punishment because our membership of tribes was once vital to our survival in the wilderness[14]. The Second Track has widely substantiated and explicitly leveraged the intensity and breadth of brain activity involved in social interactions. Participants attend voluntarily rather than being assigned or obligated, and the trust and common purpose found in voluntary groups united by a common cause tend to generate a higher level of effort and commitment. Neuroscience can track how the brain rewards itself for positive social interactions and seeks more in the future as a survival mechanism, just as it can chart the ways regions of the brain assign value to alternatives and undertake decision making.

The heightened level of creativity[15] expected from Second Track group functioning and focus on implementing effective outcomes also tend to force higher performance from their participants eager to align with the norms of the new 'tribe.'

11. Kaufman, 2019
12. Investopedia, 2021
13. National Institute of Neurological Disorders and Stroke, 2021
14. Koen, 2016
15. Fritz, 2021a

Similarly, the fluid agenda, positive ethos and open platform offered by Second Track groups echoes the 'yes and ...' formula. This is used by theatrical and comic improvisation groups to spin spontaneous stories and characters out of fresh air in ways individuals or formal groups could never have created. Mutual respect and trust in such troupes are fundamental to their success, and the common purpose, shared expert standing and impartial supervision of Second Track groups tend to build similar bonds which extend beyond the confines of the meeting to offline activities and additional endeavours.

Neuroeconomic research[16] has shown how the efficient allocation of value to alternatives becomes blurred when too many options are considered, and the brain works best when such choices are winnowed down to a manageable core. Second Track groups similarly sift the plethora of ideas and proposals they generate in the first 'brainstorming' meeting to select a more manageable list of practical projects in the second and plan implementation in the third.

The unique combination of personal motivation and positive group reinforcement in the Second Track encourages participants to act 'prosocially' and accept the need to revise their original views, rather than selfishly or defensively protect them, as they might in 'first track' meetings. As members have no official position to defend, and there are no penalties for 'blue sky' suggestions, they are more likely to suggest new solutions and approve or improve those of others rather than reflexively look to defeat them.

The Second Track offers a trusted and safe mechanism for disparate self-interest to coalesce into common goals and shared actions by working with people's deep-seated desire for social coherence and group inclusion[17]. While the First Track sees teamwork as merely a means to a pre-proscribed end, the Second Track encourages teamwork as its initial step, confident that it will produce ends and means as a consequence.[18]

The heterogeneous nature of Second Track groups means that members exposed to alternative views and experiences as a matter of course, rather than an occasional intrusion into a homogeneous group whose loyalty lies in preserving, rather than challenging, the status quo.[19] The Second Track can cross the barriers between different – and often rival – departments, companies and organisations because its participants leave those labels at the door while retaining all their expertise and experience. Just as evolution can occur through 'genetic drift' and natural selection, Second Track groups gain fresh vitality from the constant cross-pollination of ideas.

CONCLUSION

The Second Track was not created to put neuroeconomic theory into practice – the field did not exist at the time – but insights from neuroeconomics, as well as brain chemistry, evolutionary theory and human psychology, are helping to explain why the Second Track has proved successful across a wide range of sectors and circumstances. The development of artificial intelligence, machine learning and speech recognition technology allows additional insights to emerge through techniques such as sentiment analysis.

16. Nelson-Wolter, 2019
17. Kinch-Thomas, 2020
18. An example of the speed of Second Track processes can be seen, for example, in the rapid establishment of an OECD working party on small and medium-sized enterprises and entrepreneurship following a meeting of willing national representatives at the Australian embassy in Paris in 1992. This was an area which until that time was outside of the OECD's policy focus.
19. The Second Track is particularly useful in complex projects because it allows people from different groups, jurisdictions and seniority to reveal problems and discuss solutions without bureaucratic hurdles and delay of 'first track' hierarchies.

The Second Track offers an organisational model novel ideas are allowed to blossom on fresh ground, rather than being weeded out or buried as they can be in first track situations. This improves the quality of group interactions, the ideas they generate, and the commitment of members to implement them.

The Second Track allows disparate individuals to find a common purpose, exposes them to a novel, thought-provoking ideas and information, and leverages fundamental brain functions and group imperatives towards positive ends.

The acceptance that 'wicked' problems have a range of complex but explicable drivers is fundamental to understanding and the success of the Second Track. Rather than look for a single cure-all solution derived from past practice, or a single authoritative source, Second Track groups use their collective brainpower to synthesise a practical solution to particular problems. Second Track decisions result from the interplay of diverse participants, rather than any single contribution, just as economies are the product of myriad decisions and brain functions are a complex mix of areas and activities.

The human brain, and any group of human brains, are a mechanism for converting raw inputs into value-added outputs, just like a company or economy. Different members, and brain areas, will have their specialities, but all must be firing and interacting without barriers for the optimum result.

Further enhanced by ongoing research into neuroscience, the Second Track offers an ideal mechanism for reshaping the ossified organisational structures of the past to meet future challenges.

REFERENCES

Beaty, R.E. (2020), The Creative Brain, Dana Foundation, https://dana.org/article/the-creative-brain/

Bénabou, R. (2007), Groupthink: Collective Delusions in Organizations and Markets; Princeton University, https://www.princeton.edu/~rbenabou/papers/groupthink%20iom%2041%20fin.pdf

Diamond, L. and McDonald, J. (1991), *Multi-Track Diplomacy: A Systems Guide and Analysis*, Iowa Peace Institute

Fisher, C. (2021), Group-think: what it is and how to avoid it; *The Conversation*, 27 May 2021, https://theconversation.com/group-think-what-it-is-and-how-to-avoid-it-161697

Fritz, P. (2019), Second Track to Success, *BESS®*, Vol. 1, No. 1, https://journals.aau.dk/index.php/BESS/article/view/6450

Fritz, P. (2021a), Creativity and compliance, *Open Forum*, https://www.openforum.com.au/compliance-and-creativity/

Fritz, P. (2021b), The neuroscience of the Second Track, *BESS®*, Vol. 3, No. 1, https://journals.aau.dk/index.php/BESS/article/view/6775

Investopedia, Groupthink, retrieved on 1 No 2021 from https://www.investopedia.com/terms/g/groupthink.asp

Kahneman, D. (2011), *Thinking, Fast and Slow*, Farrar, Straus and Giroux

Kaufman, S.B. (2019), The Neuroscience of Creativity: A Q&A with Anna Abraham; *Scientific American*, 4 Jan 2019, https://blogs.scientificamerican.com/beautiful-minds/the-neuroscience-of-creativity-a-q-a-with-anna-abraham/

Kinch-Thomas, J. (2020), Your Brain on Collaboration: The Neuroscience of Collaboration Takeaways; https://www.tuneintoleadership.com/blog/your-brain-on-collaboration

Koen, S.L. (2016), Brain-centered hazards: Risks and remedies; Excerpted from the Brain-Centric Leadership™ Seminar ©2016, RoundTheClock Resources, Inc. A DEKRA Insight Strategic Partner; https://www.fs.usda.gov/rmrs/sites/default/files/Brain-centered%20hazards.pdf

Mayfield Brain & Spine, Anatomy of the Brain, retrieved on 1 Nov 2021 from https://mayfieldclinic.com/pe-anatbrain.htm

Morse, G. (2006), Decisions and Desire, *Harvard Business Review*, https://hbr.org/2006/01/decisions-and-desire

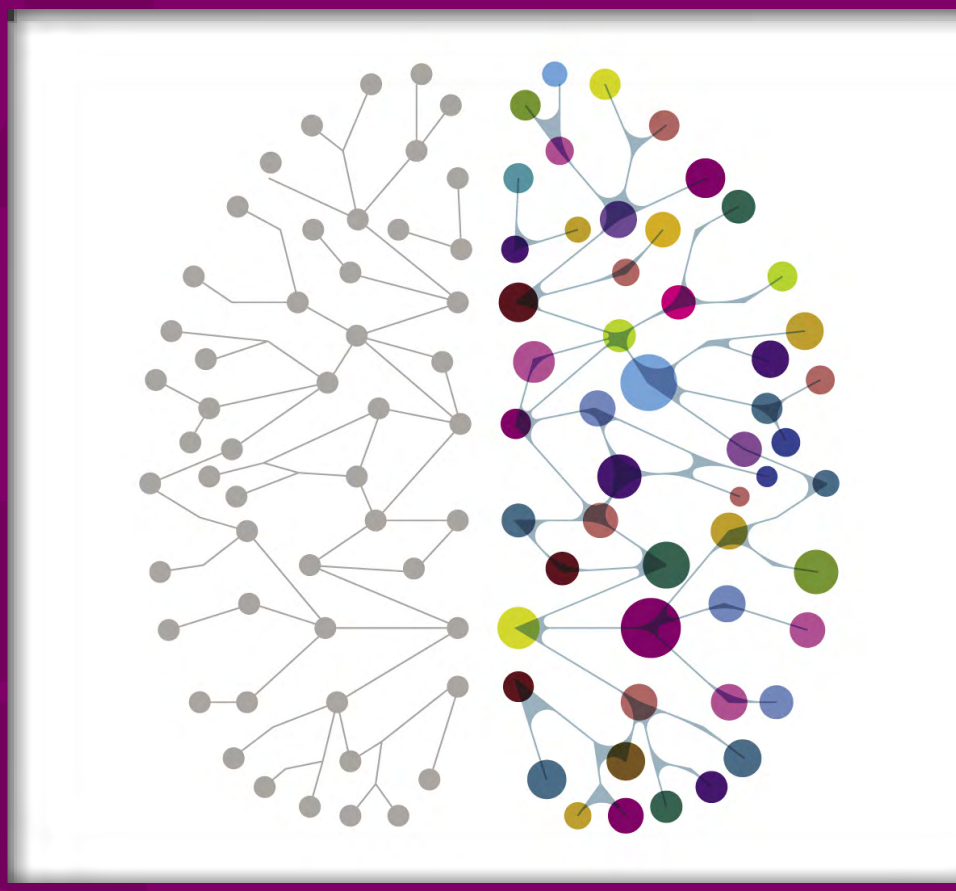
National Institute of Neurological Disorders and Stroke, Brain Basics: Know Your Brain; retrieved on 1 No 2021 from https://www.ninds.nih.gov/Disorders/Patient-Caregiver-Education/Know-Your-Brain

Nelson-Wolter, M. (2019), Why the best collaborative teams look like the human brain; https://trint.com/resources/qn8z3okr/why-the-best-collaborative-teams-look-like-the-human-brain

Smets, K. (2017), Behavioural Economics meets Groupthink; https://medium.com/new-organizational-insights/behavioural-economics-meets-groupthink-742e7bc8d4d1

JOURNAL OF BEHAVIOURAL ECONOMICS AND SOCIAL SYSTEMS

Volume 4, Number 1, 2022



gap | TCG