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How we think about one another: In-group (us) versus out-group (them), and how insights from neuroscience can deepen our understanding and actions at work

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> 'There is no greatness where there is no simplicity, goodness, and truth'.
>
> Leo Tolstoy (*War & Peace*)

The global trend towards team-based organisations is growing. Multifunctional organisational networks that work in an agile way and that need to scale quickly to demand require a collaborative approach (Davaei & Gunkel, 2024). This approach of collaboration in groups has similarities to the African 'Ubuntu' philosophy, which captures the essence of being human: a person is a person through other people. It embraces generosity, caring about others and being willing to serve others for the sake of the greater good. As Nelson Mandela said (Stout-Rostron, 2019):

> Ubuntu in business can help bridge gaps between people in the workplace, stakeholders within and outside the enterprise and between businesses, and the broader society in which they operate. Ubuntu is best understood experientially. (p. 94)

It is well understood that as human beings, we are a social species, so much so that the survival and success of our species depend on our ability to function in complex social interactions. This social complexity makes us take shortcuts in making sense of each other. Psychologists have long contended that people exhibit in-group (us) and out-group (them) biases (Merritt et al., 2021). This process of exhibiting in-group (us) and out-group (them) behaviour can be conscious or implicit. In fact, people naturally tend to associate with those who are like themselves and maintain some social distance from those who are dissimilar. To some extent, this natural tendency helps satisfy specific basic psychological needs in people who cooperate with in-group members (Cherry, 2000).

Firstly, at the heart of this editorial is the aim of understanding our social cognition, that is, how ordinary people make sense of others and themselves. Secondly, to highlight significant pieces of research from the cross-fertilisation between psychology and neuroscience theories and methods to show how mental shortcuts work and why they exist. Thirdly, how to change these shortcuts to build greater real-world social cohesion.

Our social world is complicated, and our minds are limited

Our lives at work occur in the context of social interactions, and they will continue to do so. It requires the ability to take social norms into account and to understand others. The importance of social interactions cannot be underestimated. As Cacioppo (2002) aptly puts it, 'Human survival depends in large part on the formation of alliances and accurate judgements'.

Understanding our social wiring and how the brain gives rise to diverse social processes can help us untangle human workplace behaviour at its best and worst. The 'source code' for neuroscientists – the epic and immense work of Erik Kandel, James Schwartz, Thomas Jessel, Steven Siegelbaum and A.J. Hudspeth, *The Principles of Neural Science* (2013), can be summarised in four words: principles of neural connection (Kandel et al., 2013). Also, eloquently put by Rossouw and Rossouw (2017):

> Everything in neural science – from our genetic makeup to the activity of neurons and glial cells, to the production of neural chemicals – points to one key function: managing and maximising connections for the organism to (first and foremost) survive and ultimately to thrive. (p. 41)

The same goes for social connections at work. Our neural and cultural processes are linked, and our brains are predisposed to pick up our cultures as they socialise us.

Our sociality is ancient and by design

From birth, as a survival instinct, the brain's default network comes online to assess others instantly. Within the first few months of life, an infant generally becomes attached to his parents and associates them with safety. This early attachment will begin to establish an in-group preference for faces that look like his and less towards those of other races. This early attachment is a basic psychological need that continues over the human lifespan (Lieberman, 2013).

Belonging to a group is a basic psychological need that employers need to fulfil within concrete organisational settings. According to the neuropsychotherapy (NP) model of psychological functioning, a neuro-reflexive approach is most valuable: fundamentally, it means we can match the evolutionary development of behaviour, the development of the brain and the basic psychological human needs (the need for pleasure maximisation and distress avoidance, the need for attachment, the need for control and the need for self-esteem enhancement) into a coherent framework (Henson & Rossouw, 2013).

According to Grawe (2007), well-being at the individual, group and societal levels depends almost entirely on the degree to which humans manage to attain their motivational goals (fulfil their basic psychological needs). In addition, optimal neural functioning is established through the consistency with which these basic needs are fulfilled. The uniqueness of NP lies in its holistic theoretical model, which focuses on the neural processes underlying human responses (Geldenhuys, 2020, 2022).

The basic psychological needs are deeply ingrained in the human nervous system. These needs can be better understood through a large-scale brain network perspective, which reveals how complex cognitive functions and behaviours develop from the dynamic interactions of distributed brain regions rather than from isolated areas. Examining large-scale brain networks provides a robust framework for explaining and predicting individual behavioural differences (Bressler & Menon, 2010; Sporns, 2013).

The first large-scale social network is the default mode network (DMN). Our social connectedness (the basic need for attachment) is at the heart of human evolution and flourishing. In a functional Magnetic Resonance Imaging (fMRI) experiment conducted by Spunt et al. (2015), the DMN was activated whenever a participant took a break from a mathematics exercise sample. The message is that we use our free time to think socially, and this may be because the default 'go to behaviour' has been selected to ensure the survival of the species. Thus, social thinking is, in essence, a reflex.

The Salience Network (SN) is a controller or network switcher that decides which information is most important and which should receive priority in the queue of brain signals awaiting transmission, based on the task at hand. The Central Executive Network (CEN) is engaged in higher-order cognitive and attentional control. This is also called the analysing system or Task-Positive Network (TPN). The TPN is triggered during a broad range of non-social tasks and is correlated with focusing attention, making decisions and problem-solving. Neural activity in the CEN is inclined to inhibit activity in the DMN and *vice versa* (Du Buisson-Narsai, 2023).

These networks represent key social adaptations to the environment and help us coordinate our lives effectively with each other. These networks also help to hold back our selfish impulses for the greater good of humanity. On the flip side, these social networks foster envy and unhealthy workplace competition. When these networks are in synchrony, optimal brain performance results. When synchrony is poor, efficient and normal cognition and motor behaviour are compromised (Sporns, 2013).

Neuropsychotherapy theory holds the view that social mental shortcuts or bias often arise when basic needs (especially control, attachment or self-esteem) are threatened. Grawe (2007) argued that when individuals feel psychologically safe, they are less defensive, less susceptible to stereotyping and bias and more open to difference. Educational or therapeutic interventions that enhance self-worth and belonging and reduce fear and uncertainty, indirectly lower bias by decreasing the motivational basis for in-group favouritism or out-group derogation.

Cultures matter: Perceptions of in-groups (us) and out-groups (them)

In one of the most extensive meta-analyses to date of the fMRI literature, the neural correlates of social cognition across group lines were examined (Merritt et al., 2021). Social cognition about in-group members was related to DMN activation, whereas social cognition about out-group team members was more reliably associated with exogenous attention and salience (SN). These studies' findings align with the existing behavioural data and the theories on race-based intergroup social phenomena (e.g. in-group favouritism and out-group degradation) and help explain how the brain gives rise to diverse social cognitive processes, which, in turn, may manifest as biased social behaviours in intergroup contexts.

Us/them-ing is about relations between groups and our spontaneous tendency to favour in-groups over out-groups. Similarly, hierarchies are about a kind of relationship within groups, namely our automatic propensity to favour people close in rank to us over those who are distant (Sapolsky, 2017). Our brains change physically in response to cultural experience (Dunbar, 2012).

These us/them tendencies appear early in life. The intertwined cognitive and affective underpinnings are a

primate brain inheritance, and our brains are inherently quick to spot us *versus* them. The self-regulation to pause before deciding whether someone is a friend or a foe comes online much later. To harmonise with the group, we want to be part of it and require self-control in line with its social norms, ways and values. Deploying the brain's braking system 'CEN' mediated by the ventrolateral prefrontal cortex (VLPFC) helps us support the group, sometimes at the expense of our own unsocialised instincts or impulses. In essence, self-control is the experience of applying effort to overcome something (Lieberman, 2013).

Survival mechanisms underpin in-group/out-group distinctions. In our desire to feel safe, we bond with those we see as most like us, so we can protect ourselves from those who might harm us. The virtual barriers we build keep outsiders out and let us go on with our daily lives, feeling protected and secure. However, it is precisely these barriers that keep us from bonding with our fellow human beings and, in turn, undermine our true social connectivity, sense of security and social cohesion.

This in-group positivity and out-group negativity also impacts our natural tendency for empathy. Our level of empathy can be influenced by the extent to which we perceive others as like us (in-group) and by our prior experience with an individual regarding fairness and, therefore, trust. We empathise to a greater degree with those who are similar to us and who we believe are fair and trustworthy (Singer et al., 2004).

Cultivating plasticity for social cohesion – Reducing social mental shortcuts and bias

Overcoming social bias is a deep challenge, but as evidence accumulates for the distinct neural status of social thinking and our basic psychological needs, powerful insights emerge into *why* bias occurs and *how* we might change it. The evidence shows that our brains are wired for group categorisation and prejudice but also remarkably flexible when conditions shift (Fiske & Taylor, 2021).

Given that thinking about self and others is inevitable, one way to help reduce the time needed for a new or changing team to be fully productive, while minimising the tension, fear or anxiety common in group development, is for the leader to ensure that the team engages in ways that will bring to the surface points of resemblance, strengthen resonances, cultivate empathy and contribute to the feelings of trust. Only after a sense of relatedness or social support has been established can social differences be effectively addressed (Sherman et al., 2016).

How to proceed? In a meta-analysis by Donaldson, Villalobos and Cho (2025), the authors reviewed 2515 peer-reviewed studies to identify evidence-based strategies for reducing prejudice (especially race/ethnicity and gender) and its harmful consequences. It highlighted four effective approaches: intergroup contact, perspective-taking, narrative or interactive experiences and multifaceted interventions combining several methods. Here is how we can leverage change plasticity to overcome bias and stereotyping and build social cohesion and intergroup flexibility in an evidence-based, real-world way.

Contact interventions

Direct and indirect contact interventions were found to be the most successful evidence-based approaches to reducing prejudice (Donaldson et al., 2025), anchored in Intergroup Contact Theory (Allport et al., 1954), which states that interpersonal contact is one of the best ways to reduce prejudice between majority and minority group members. Contact interventions can include contact meetings and cooperative learning programmes, for example, creating shared goals and building collective identity.

Creating shared goals and collective identity

Although the brain is susceptible to in-group membership, it is not always clear who is 'in'. By fostering a shared group identity, in-group circuitry 'DMN' is activated, thereby increasing empathy and cooperation.

Shared purpose is a foundational social driver and by promoting goals that require group cooperation and framing tasks that call for shared challenges and mutual dependence, a collective identity and common humanity, without ignoring diversity, can be highlighted (Gaertner & Dovidio, 2014; Van Bavel et al., 2008). Making a regular effort to engage in social interactions in the workplace, such as regular lunches, also builds in-group dynamics.

Valuable research for organisation scholars is by Doyle et al. (2017), who found that a person's base-rate use of the first-person singular 'I' or the plural 'We' might indicate their degree of group identity internalisation. This study shows that people who do not switch from 'I' to 'We' pronouns during the first 6 months of employment are more likely to leave their jobs. Not feeling part of the in-group is among the strongest predictors of turnover.

Perspective taking approaches

From prejudice and bias to individuation

Also known as a form of cognitive intervention, perspective-taking is a well-supported strategy for reducing prejudice (Donaldson et al., 2025). Perspective-taking is understanding how a situation appears to another person and how that person reacts cognitively and emotionally to the context. According to Todd and Galinsky (2014), the benefits of perspective-taking include: more favourable implicit and explicit intergroup evaluations, stronger approach-oriented action tendencies and positive non-verbal behaviours, increased intergroup helping, reduced reliance on stereotype-maintaining mental processes and heightened recognition of intergroup disparities.

Given that the brain defaults to stereotype-based processing (social mental shortcuts), especially under elevated cognitive load, a demonstrated way to overcome stereotyping is to increase individuation, which, by recruiting the DMN or person-specific processing regions in the brain, leads people to be seen as individuals (Lieberman, 2007). Interventions based on perspective-taking include social awareness training, social categorisation, cognitive and emotional training and knowledge acquisition (Donaldson et al., 2025).

This can be achieved by promoting interactions in one-on-one or small-group contexts, encouraging people to share and learn from each other's personal stories (enabling neural coupling) and engaging in perspective-taking exercises, all of which can improve intergroup relations and reduce stereotyping.

Perspective-taking is the process of actively considering the thoughts, feelings and experiences of members of another social group, for example, taking a first-person account of others' perspectives, ideally in a written form (Ames et al., 2008). Thus,

> [*I*]magine for a moment that you are this person, walking through the world in their shoes and seeing the world through their eyes. Think about how you, as this person, would experience this event. (Ames et al., 2008, p. 642)

Narrative and interactive experiences

By repeated exposure to positive and diverse counter-stereotypical out-group role models, as found, for example, in the media and among admired leaders, teachers and characters in stories, neural associations can be reshaped by reducing salience and by increasing the brain's response to out-group faces (Donaldson et al., 2025). Another avenue can be to compensate for one's implicit preferences by actively countering stereotypes. For example, if you have an inherent preference for young people, you can try to be friendlier towards older adults (Lebrecht et al., 2009; Phelps et al., 2000).

Multifaceted interventions

Prejudice-reduction intervention research is a heavily applied science, with most interventions employing a multifaceted approach (Donaldson et al., 2025). According to these authors, continuous training using multiple strategies is recommended, with a skilled facilitator. Examples of evidence-based interventions include:

Mindfulness and attention awareness interventions

Cognitive load is a tipping point for cognitive bias (Richeson & Shelton, 2003). A fundamental concept in social cognition is that cognitive load makes social thinking efficient (Fiske & Taylor, 2021), as when the brain is under chronic elevated stress, such as tough work deadlines or uncertainty, it resorts to taking mental shortcuts – rules of thumb ('heuristics') that allow quick, simplified decision-making but can also result in systematic errors or distortions in thought processes (cognitive biases).

To reduce threats and uncertainty and promote more reflective (slower) processing, it is necessary to create environments and situations that do not trigger defensiveness, instead promote psychological safety and encourage mindfulness or emotion regulation practices. This can be done by mindful attention awareness interventions (Hölzel et al., 2011). Also, being around people who see things positively can reduce perceptions of cognitive overload.

Coaching, leadership conversations and talking therapies

Using NP as a theoretical framework, unsafe environments can be reconsolidated through modalities such as coaching, talking therapies and enriched conversations. Behavioural examples include being trustworthy and trusting others (deliberate the attachment needs), helping workers feel valued, heard and listened to (deliberate the basic human need for control) and providing genuine, positive feedback when it is due (deliberate the need for pleasure maximisation) (Henson & Rossouw, 2013). Cultivating safe and enriched environments can help overcome feelings of exclusion and contribute to greater social cohesion.

Conclusion

This editorial aims to show that understanding brain development from a neural perspective (using evidence-based, holistic models like NP or fine-grained fMRI studies) can deepen our understanding of social cognition – how we think about one another and how we take mental shortcuts and exhibit biases. Thus, bias is not only a moral issue but also a neural habit, and habits can change. Indeed, social cognitive neuroscience reveals that bias is grounded in predictive, efficient and emotionally driven brain processes, and that our brains can rewire through relaxation, reflection, relationship and repetition. Understanding the principles of basic human needs shows how evolved brain networks for group belonging, control and self-esteem can both foster social cohesion and create social division.

Prejudice and bias also appear to be malleable, with studies showing that interpersonal contact, shared goals, team membership, perspective-taking interventions and learning can reduce prejudice and neural bias. As we grapple with the pervasive impact of prejudice at work and in society, the need for robust and innovative interventions and adaptable strategies remains paramount.

In conclusion, Leo Tolstoy's quote 'There is no greatness where there is no simplicity, goodness, and truth', suggests that Prejudice often stems from distorted or inflated beliefs and that true moral and social 'greatness', including social justice, can only develop when individuals and societies act with clarity, empathy and honesty. Simplicity calls us to see people as they are: human beings with similar needs and emotions. These values and neurally informed social behaviours are at the heart of meaningful attempts to reduce prejudice, increase bias awareness and social cohesion.

Defining key terms

Bias, heuristics, prejudice, and stereotypes are defined here by Fiske and Taylor (2021).

Bias: Behaviours from intergroup affect and stereotypes extend stereotypes into discriminatory actions (most frequently studied for gender, race and age). Some biases are conscious and deliberate, while others are unintentional – also known as unconscious biases – and function without the individual's awareness.

Heuristics: One kind of shortcut people use for judgements under uncertainty, which rely on ease of bringing instances to mind to reduce complex problem-solving to simpler judgemental operations and meet the pressing demands of the environment.

Prejudice: The affective side of intergroup bias, evaluations of and feelings about groups.

Stereotypes: The cognitive side of intergroup bias, beliefs about groups.

References

Allport, G.W., Clark, K., & Pettigrew, T. (1954). *The nature of prejudice*. Addison-Wesley.

Ames, D.L., Jenkins, A.C., Banaji, M.R., & Mitchell, J.P. (2008). Taking another person's perspective increases self-referential neural processing. *Psychological Science, 19*(7), 642–644. https://doi.org/10.1111/j.1467-9280.2008.02135.x

Bressler, S.L., & Menon, V. (2010). Large-scale brain networks in cognition: Emerging methods and principles. *Trends in Cognitive Sciences, 14*(6), 277–290. https://doi.org/10.1016/j.tics.2010.04.004

Cacioppo, J.T. (2002). Social neuroscience: Understanding the pieces fosters understanding the whole and vice versa. *American Psychologist, 57*(11), 819. https://doi.org/10.1037/0003-066X.57.11.819

Cherry, F. (2000). The nature of the nature of prejudice. *Journal of the History of the Behavioral Sciences, 36*(4), 489–498. https://doi.org/10.1002/1520-6696(200023)36:4<489::AID-JHBS13>3.0.CO;2-N

Davaei, M., & Gunkel, M. (2024). The role of intelligences in teams: A systematic literature review. *Review of Managerial Science, 18*, 259–297. https://doi.org/10.1007/s11846-023-00672-7

Donaldson, S.I., Villalobos, J.P., & Cho, M. (2025). Following the science to understand how to reduce prejudice and its harmful consequences: A guide for evaluators and program planners. *Evaluation and Program Planning, 110*(April 2024), 102556. https://doi.org/10.1016/j.evalprogplan.2025.102556

Doyle, G., Goldberg, A., Srivastava, S., & Frank, M. (2017). Alignment at Work: Using Language to Distinguish the Internalization and Self-Regulation Components of Cultural Fit in Organizations. In *Proceedings of the 55th Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*, Vancouver, Canada (pp. 603–612). Association for Computational Linguistics.

Du Buisson-Narsai, I. (2023). *Conceptualising neuroscience-based leadership behaviour*. Doctoral thesis, Canterbury Christ Church University. Retrieved from https://repository.canterbury.ac.uk/download/5d8a4d68f87a4b0c9f1310da9a0ac7d23e0cb15c7e524edd838e09fc9e3d2c3e/8265035/2023%20PHD%20%20%2B%20Thesis%20%2BFinal%20Manuscript%20%2B%208%20Dec%20%2Bfinal%20%202024.pdf

Dunbar, R.I.M. (2012). The social brain meets neuroimaging. *Trends in Cognitive Sciences, 16*(2), 101–102. https://doi.org/10.1016/j.tics.2011.11.013

Fiske, S.T.T., & Taylor, S.E. (2021). *Social cognition: From brains to culture*. A. Maher (Ed.) (4th ed.). Sage.

Gaertner, S.L., & Dovidio, J.F. (2014). *Reducing intergroup bias: The common ingroup identity model*. Psychology Press.

Geldenhuys, D.J. (2020). Valuing and adapting appreciative inquiry to enhance well-being using a neuropsychotherapeutic framework. *SA Journal of Industrial Psychology, 46*, 1–12. https://doi.org/10.4102/sajip.v46i0.1823

Geldenhuys, D.J. (2022). A conceptual analysis of the use of systems – Psychodynamics as an organisation development intervention: A neuroscientific perspective systems-psychodynamics research design. *SA Journal of Industrial Psychology, 48*, 1–12. https://doi.org/10.4102/sajip.v48i0.1940

Grawe, K. (2007). Review of neuropsychotherapy: How the neurosciences inform effective psychotherapy and neuropsychotherapie (Neuropsychotherapy). *Psychotherapy: Theory, Research, Practice, Training, 44*(1), 118–120. https://doi.org/10.1037/0033-3204.44.1.118

Henson, C., & Rossouw, P. (2013). *Brainwise leadership*. Learning Quest.

Hölzel, B.K., Lazar, S.W., Gard, T., Schuman-Olivier, Z., Vago, D.R., & Ott, U. (2011). How does mindfulness meditation work? Proposing mechanisms of action from a conceptual and neural perspective. *Perspectives on Psychological Science, 6*(6), 537–559. https://doi.org/10.1177/1745691611419671

Kandel, E.R., Schwartz, J.M., & Jessell, T.M. (2013). *Principles of neural science* (5th ed.). McGraw-Hill.

Lebrecht, S., Pierce, L.J., Tarr, M.J., & Tanaka, J.W. (2009). Perceptual other-race training reduces implicit racial bias. *PLoS One, 4*(1), e4215. https://doi.org/10.1371/journal.pone.0004215

Lieberman, M.D. (2007). Social Cognitive Neuroscience: A Review of Core Processes. *Annual Review of Psychology, 58*(1), 259–289. https://doi.org/10.1146/annurev.psych.58.110405.085654

Lieberman, M.D. (2013). *Social: Why our brains are wired to connect*. OUP Oxford.

Merritt, C.C., Maccormack, J.K., Stein, A.G., Lindquist, K.A., & Muscatell, K.A. (2021). The neural underpinnings of intergroup social cognition: An fMRI meta-analysis. *Social Cognitive and Affective Neuroscience, 16*(9), 903–914. https://doi.org/10.1093/scan/nsab034

Phelps, E.A., O'Connor, K.J., Cunningham, W.A., Funayama, E.S., Gatenby, J.C., Gore, J.C., & Banaji, M.R. (2000). Performance on indirect measures of race evaluation predicts amygdala activation. *Journal of Cognitive Neuroscience, 12*(5), 729–738. https://doi.org/10.1162/089892900562552

Richeson, J.A., & Shelton, J.N. (2003). When prejudice does not pay: Effects of interracial contact on executive function. *Psychological Science, 14*(3), 287–290. https://doi.org/10.1111/1467-9280.03437

Rossouw, J.G., & Rossouw, P.J. (2017). *Executive resilience: Neuroscience for the business of disruption* (1st edn.). Driven Books.

Sapolsky, R.M. (2017). *Behave: The biology of humans at our best and worst*. Penguin.

Sherman, S.M., Cheng, Y.-P., Fingerman, K.L., & Schnyer, D.M. (2016). Social support, stress and the aging brain. *Social Cognitive and Affective Neuroscience, 11*(7), 1050–1058. https://doi.org/10.1093/scan/nsv071

Singer, T., Seymour, B., O'doherty, J., Kaube, H., Dolan, R.J., & Frith, C.D. (2004). Empathy for pain involves the affective but not sensory components of pain. *Science, 303*(5661), 1157–1162. https://doi.org/10.1126/science.1093535

Sporns, O. (2013). Structure and function of complex brain networks. *Dialogues in Clinical Neuroscience, 15*(3), 247–262. https://doi.org/10.1007/978-3-642-40308-8_2

Spunt, R.P., Meyer, M.L., & Lieberman, M.D. (2015). The default mode of human brain function primes the intentional stance. *Journal of Cognitive Neuroscience, 27*(6), 1116–1124. https://doi.org/10.1162/jocn_a_00785

Stout-Rostron, S. (2019). *Transformational coaching to lead culturally diverse teams*. Routledge.

Todd, A.R., & Galinsky, A.D. (2014). Perspective-taking as a strategy for improving intergroup relations: Evidence, mechanisms, and qualifications. *Social and Personality Psychology Compass, 8*(7), 374–387.

Van Bavel, J.J., Packer, D.J., & Cunningham, W.A. (2008). The Nnural substrates of in-group bias: A functional magnetic resonance imaging investigation. *Psychological Science, 19*(11), 9.