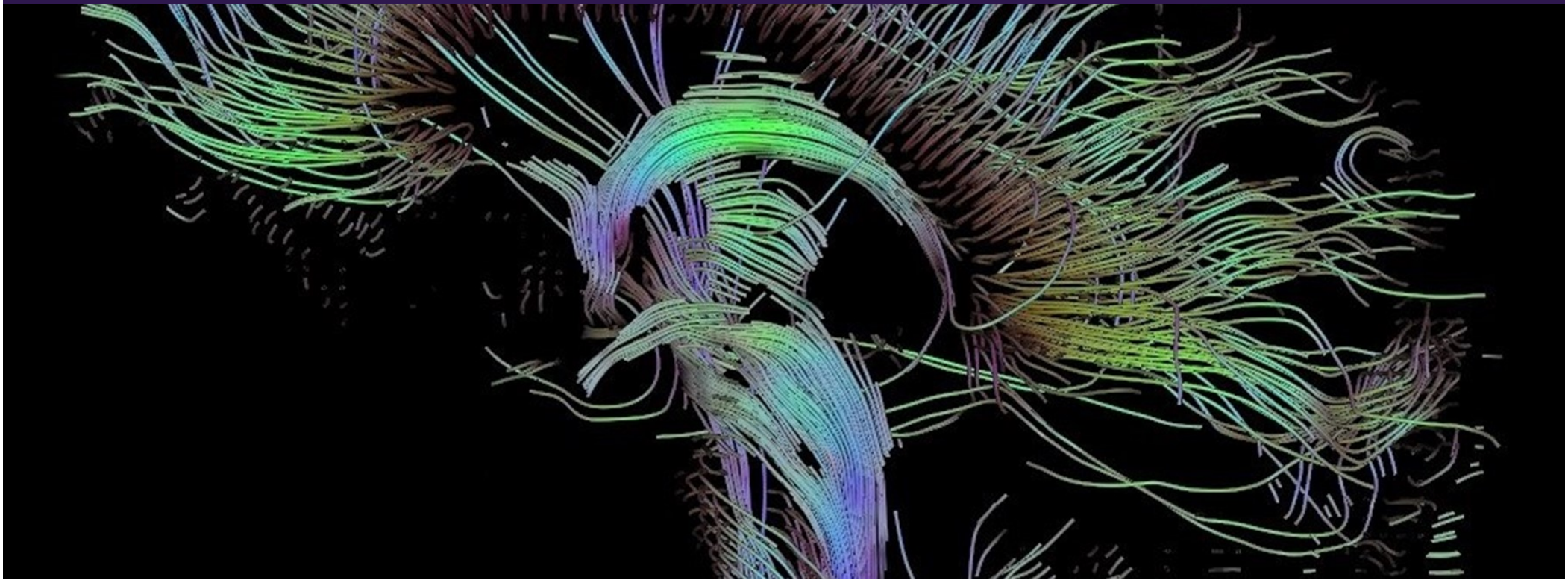

What Does Neuroscience Have to Offer Peacebuilders?

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Neuroscience, the scientific study of the nervous system, is a rapidly emerging interdisciplinary scientific approach, offering exciting new insights into our understanding of human behaviour. Could it also help us overcome many of the difficulties of peacebuilding?

Why do violent conflicts arise so easily? Why do groups and nations believe that their own violence is justified but not that of the other sides? How do political or religious fundamentalist ideologies capture the minds and hearts of people and groups, often beyond the value of their own lives? Why do people often believe, or create, their own versions of 'truth'? Why does peacebuilding take so long – and be so darned difficult?

As a social and political psychologist, these questions have absorbed and challenged me for decades. Then, some years ago I came across a relatively new science – or parts of other sciences – which helped me to re-think many of my ideas about the difficulties of peacebuilding. These were the emerging ideas that question whether or the not the ways in which we as humans have been physically shaped by the exigencies of evolution, have left us with some body/brain legacies which, if left unattended, seem to hamper our capacities to live together and to resolve our conflicts peacefully. Many of these processes are currently being studied by businesses, educational institutions, governments and others for their possible use in shaping human behavior, but not as yet in any conscious way by social and international conflict resolvers. These new fields are called variously biopsychology, genopolitics, political

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physiology, behavioral genetics, cognitive neuroscience, etc. What do they suggest to us that may be of use to those in the peacebuilding professions?

We are strangers to ourselves

Contrary to what most of us believe, our human capacity for rational judgment is much (much!) shallower than we think. We are limited by our nature as human beings whose very existence throughout history was often dependent upon instincts and emotions to survive. Mostly, it is the emotional brain that drives us, in this case the amygdala, the part of our brain that deals with our memories, pleasures and fears. Millennia of evolution have shaped us to feel first and think (if at all) afterwards. Research using Functional Magnetic Resonance Imaging (fMRI shows) that feelings usually precede the analytic and logical reasoning that comes from our anterior cingulate cortex, which controls our logical thinking, and this is true particularly in times of stress. Our 'emotional' and 'reasoning' minds coexist uneasily. Our choices are often instinctual, dictated not only by our brain structures, but also by hormones such as adrenaline, norepinephrine and cortisol, which inform our response to fear messages. Thus when we feel threatened, or someone – and particularly a leader, or would be leader – tells us that we are being threatened, our amygdala fears overwhelm the cortex thinking that is needed to rationally respond to complex and changing situations. This supremacy of emotions is particularly relevant in situations termed "weak psychological situations" such as crises or situations characterized by uncertainty or conflict.

Our brains differ

Genetically, the power of the amygdala can differ from person to person, and enables some of us to tolerate uncertainty more easily, and to be more open to

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those we see as 'others'. fMRI scans have shown that these differences in biology, and in genetics, influence differences in attitudes and beliefs.

At one end of the spectrum, people, often called traditionalists, or conservatives, are influenced more by their amygdala. Having genetically greater sensitivity to fear and uncertainty they are more likely to advocate policies that protect the existing social structure from both external out groups and internal, norm-violator threats. They have a greater need for order, structure, and certainty in their lives, resist change more often, and are less open to risk taking. Researchers have shown that they are usually more supportive of policies that provide them with a sense of security: hence their greater backing for e.g. military spending, capital punishment, patriotism, and tougher laws on immigration.

On the other end of the continuum, there are people who are genetically more open to new things, and to new experiences – these are often termed 'liberals'. fMRI scans have shown that they can better tolerate uncertainty, and cognitive complexity, take risks more often, and have wider and more diverse friendships. They often exhibit stronger preferences for social change and for equality when compared with traditionalists. Researchers have identified a variant called DRD4-7R, which affects the neurotransmitter called dopamine and a further 11 genes which are responsible for inclining people towards liberal or conservative beliefs: these are genes involved in the regulation of three neurotransmitters—dopamine, glutamate and serotonin—and also G-protein-coupled. There is speculation that evolutionary wise it may have proved useful to have such varied types of individuals in a society so as to ensure the best survival responses to different sets of societal and group challenges.

We are ‘groupish” people

There is a now an increasing, and welcome, body of literature stressing the innate tendencies for cooperation between people, in contrast to the competitiveness that previous evolutionary psychology has suggested is the norm. However, it appears that although biologically humans have evolved for cooperation, it is mainly with those people they perceive as their own group. Experiments have shown that bonding within groups is assisted by the hormone oxytocin, a rise in the level of which appears to provide a ‘glue’ between people, making them demonstrably more generous, trusting and compassionate towards their neighbours.

Spraying oxytocin into people’s noses increases a sense of belonging, or connectedness to a group, and makes them more willing to cooperate with them. However, research has also shown that while oxytocin can increase levels of cooperation within a group, it can also promote ethnocentric behavior, increase our suspicion and rejection of ‘others’ outside the group, and make people less likely to cooperate with members of an out-group.

Brain imaging experiments (fMRI) have also shown that our attitude towards out-groups is affected by what scientists call ‘mirror neurons’, which are linked to our capacity for empathy, which helps us to better understand other peoples intentions, feelings and emotions.

Unfortunately, when we encounter people from groups we perceive as others, the brain often switches off the empathetic neurons and actively resists any emotional connection with the perceived other group. There is also some research from MIT on Israeli/Palestinians and US/Mexican group processes using fMRI scans during group dialogues that suggests it is particularly hard for

groups who see themselves as 'oppressed' groups to feel any empathy with those they see as having more power than they have.

Mirror neurons also have the effect of increasing emotional contagion so e.g. during a political landscape where fear is high and emotions are strong, there is quite a bit of emotional contagion occurring between individuals, which will drive them to group behaviour that can be contrary to their 'normal' characteristics.

Truth is as we see it

What we see as 'truth' is often determined by our innate needs for beliefs and values, our capacity to tolerate uncertainty and fear, and the cultural context in which we live – thus they have often been what is termed 'groupish' rather than necessarily true. We often rationalize what our guts tell us rather than care too much about fact checking. The number of would be ISIS recruits who have been caught with a copy of "Islam for Dummies" and "The Koran for Dummies" in their rucksacks is legendary. Suggestions that such recruits are conversant with, and committed to Islam, are therefore questionable, suggesting that alternative reasons such as a search for meaning and for a group belonging in their lives. Once we form our beliefs, we have a tendency to see and find evidence to support them, and ignore evidence that challenges them. When faced with logical contradictions to their very deeply held beliefs, fMRI scans show that although people may feel negative emotions, there is no actual increase in their reasoning cortex, which becomes quiescent. Our memories too are also notoriously faulty – they often reframe and edit events so as to create a story that will fit our current situation, conflating the past and present to suggest a story to us that suits what we need to believe today, rather than what is true

So – what does this mean for peacebuilding?

For change to happen, people need to be both emotionally and rationally engaged. As peacebuilders we often fail to understand how little actual sway logical thinking has on the actors concerned, and on their constituencies in the field. Peace agreements fall apart because, although the cognitive skills of those involved have crafted clever political and social compromises, constituents fail to feel they are winning through peace agreements.

Peacebuilding processes need to particularly appeal to traditionalists who are more afraid of change. For traditionalists, such processes will often involve leaders from trusted faith, community or political leaders who can reassure their constituencies about the advantages of various change measures, and of how such measures can ensure their future security.

We need to find ways of increasing oxytocin levels between conflicting groups at both individual and social levels. These include factors such as empathetic responses to others family/national crises, and gestures such as gift giving, meal sharing, alcohol, where such is culturally permitted (just a modicum – too much can make us belligerent!) positive physical gestures, expressions of understanding and appreciation, sharing of family stories, group singing, etc. Note that none, or almost none of these are mentioned in the mediator's guidebooks, but fMRI and hormonal testing indicate that perhaps they should be. Also, given the challenges of achieving empathy as shown by the patterning of mirror neurons, we need to ensure that dialogue processes address, or promise to address, structural societal differences, as little empathy between perceived victims/oppressor groups can be achieved without such promises.

We should not get too hung up on issues of 'factual' differences, but should try and see why it is important for some people or groups to hold on to a version of facts that seems incontrovertibly incorrect to 'experts'. It may be more helpful to see such beliefs as a need for personal or group safety or congruence, or as a lack of trust in the sources and the filters through which people learn about facts, rather than of a lack of intelligence.

Conclusion

In recognizing the bio-psychological sciences as important, we need to be careful not to turn the spotlight away from structural and societal contexts that are unfair to certain groups: such contexts often bring out our worst bio-psychological feelings rather than our best. We also need to appreciate that much of the research about these processes is very tentative, and many of the mechanisms used to measure such processes are still in their infancy. Finally, and most importantly, there is nothing determinist about what is revealed by fMRI scans. While our genes can predispose us to certain ideas, they are not predestined: brains can be relatively plastic in their nature, and our bio-psychological and genetic tendencies can be altered (somewhat) by our environments.

My hope is that a greater appreciation of how our genetic and physical predispositions, allied to environmental factors, can affect our human behaviour, and can help make our work more effective and sustainable. Building our programs on the realities of our neural legacies, rather than ignoring them, may help us to relate more realistically, and more compassionately to conflicted groups whose behavior is often dictated to, and limited by, human physical processes whose consequences we are only just beginning to understand and appreciate.

Image by Wellcome Images by Thomas Schultz/Wikimedia.

Mari Fitzduff was the founding Chief Executive of the Northern Ireland Community Relations Council (CRC). The CRC was set up in 1990 to fund and work with government, trade unions, community groups, police and army, paramilitaries, prisoners, businesses and politicians on issues of peacebuilding in N Ireland. Mari has also worked on programs on conflict issues in the Basque Country, the Caucasus, Sri Lanka, Middle East, Indonesia, Russia, Crimea, Cameroon, Philippines, Peru and Columbia. From 1997-2003, she held a Chair of Conflict Studies at the University of Ulster where she was Director of a United Nations University researching peacebuilding program and practice development around the world. She is Founding Director of the MA professional programs in Conflict Resolution and Coexistence at the Heller School at Brandeis University. Her publications include: (2015) *An Introduction to Neuroscience for Peacebuilders,* *Public Policy for Shared Societies* Palgrave MacMillan (2013), Fitzduff, M and Stout, C: (Eds) (2006) *The Psychology of Resolving Global Conflicts: From War to Peace. 3 Vols*Praegar Press and Fitzduff, M and Church (Eds): (2003) *NGO's at the Table* Rowan and Littlefield. She is just finished editing a political psychology book for Praegar Press on the phenomenon of Trumpism, and why it has been so successful in engaging with so many possible voters.

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