



Original article

## Is there a T.R.U.M.P. brain? Implications for mental health and world peace



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### ABSTRACT

Neuroscientists have begun to investigate whether different political attitudes are associated with specific mind-brain markers. In this article, we build on political neuroscience research to briefly illustrate the structure and function of a Threatening, Reactionary, Unforgiving, Machiavellian, and Partisan (T.R.U.M.P.) mindset. Additionally, we discussed, building on neuroscience and clinical evidence, how to counteract the T.R.U.M.P. mindset.

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These are difficult times. Authoritarian regimes and autocratic leaders are emerging around the globe. Puzzled citizens look for explanations from the scientific community. Do clinicians and scientists hold any helpful insights about what has gone wrong in politics? Can they prescribe strategies for counteracting the current pandemic of *Threatening, Reactionary, Unforgiving, Machiavellian, and Partisan* (T.R.U.M.P.) mindset?

Personality neuroscience research is helping in identifying mind-brain typologies associated with stable attitudes toward current events and outlook regarding humanity's future on this planet.<sup>1</sup> Building on these insights, neuroscientists have begun to investigate whether different political attitudes are associated with specific mind-brain markers. In this article, we build on political neuroscience research to briefly illustrate the structure and function of a T.R.U.M.P. mindset pattern.<sup>2</sup>

### T - The neuroscience of a “threatening” political mindset

Data from extensive meta-analyses,<sup>3</sup> showed that “fear” (in response to threat and death-related anxiety) is a core emotion in political conservatism. Fear prepares the individual for a fight-or-flight response. The greater the fear the more restricted our attentional focus becomes. Our attention becomes highly selective to any potential threats, priming strategies of avoidance or attack. The constant perception of fear is the key element in the

development of a “threatening” mindset. Kanai and colleagues<sup>4</sup> showed that high levels of conservatism are associated with a larger right amygdala (a region with a central role in fear processing).

Overall, the induction of fear seems to be responsible for a mind-brain pattern characterized as “threatening”, leading individuals to adopt a right-wing political stance on a liberal-conservative axis.

### R - The neuroscience of a “reactionary” political mindset

A “reactionary” mind-brain pattern, as illustrated in political conservatism, has been reported as being negatively correlated with attitudes such as openness to experience, uncertainty tolerance and integrative complexity. Interestingly, these psychological variables are associated with specific patterns of brain activity. There is evidence that individuals scoring higher for conservatism are less responsive to stimuli which require the flexibility to change habitual response patterns.<sup>5</sup> This was illustrated by decreased activity in the anterior cingulate (a brain region important for decision-making and choosing between alternative outcomes) in response to conflicting stimuli. In other words, a “reactionary” mindset seems to be less sensitive when reacting to novel, ambiguous and complex situations. These findings suggest that a “reactionary” mindset may be less sensitive to the context and more prone to rely on inflexible behavioral patterns. More importantly, a mindset less open to experience is more prone to neuroticism, and therefore more sensitive to threatening cues. The adoption of a “reactionary” mindset leads to the restriction of the attentional focus, and may cause the individual to overestimate the

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occurrence of dangerous stimuli while underestimating the probability of neutral or safe signs.

### U - The neuroscience of an “unforgiving” political mindset

An “unforgiving” mind set is dominated by feelings and attitudes of revenge and retaliatory behavior. Revenge was associated with an increased response of the dorsal striatum, a region of the brain commonly associated with reward processing.<sup>6</sup> There is therefore evidence to suggest that a subset of individuals with oversensitivity to threat, characterized by increased amygdala activation, compensate by experiencing increased pleasure in revenge and a corresponding spike in striatal activation. If this is the case, a threatening mind-brain set ends up being positively reinforced by the “sweet” dopamine reward of revenge, and consequently an unforgiving attitude toward others. Needless to say, revenge in turn reinforces alertness to possible threats, feeding this interminable vicious circle.

### M - The neuroscience of a “Machiavellian” political mindset

So far, we have described a mind-brain pattern strongly characterized by “threatening” (overactive amygdala), “reactionary” (decreased activation in anterior cingulate) and compensating emotionally with an “unforgiving” response (greater reward processing in the dorsal striatum associated with revenge). A fourth element, a “Machiavellian” mindset, is dominated by self-serving narcissistic manipulation.

Machiavellians tend to take better advantage of cooperative partners in a Trust game, with a pattern of activation in regions associated with the inhibition of a pre-potent socioemotional response (such as dorsal lateral prefrontal cortex) and the utilization of competitive/evaluative strategies (in the inferior frontal gyrus)<sup>7</sup> showed.

A “Machiavellian” mindset constantly pursues status and wealth relying on maneuvering and manipulation. Machiavellians are particularly skilled in taking advantage of vulnerable and cooperative conspecifics through the activation of brain regions associated with the inhibition of pro-social behavior and an increase in competitive responses.

### P - The neuroscience of a “partisan” political mindset

Partisan thinking is characterized by a strong in-group allegiance contrasting with the persistence of a negative bias to members of an out-group. A “partisan” mindset discriminates against out-group individuals by stigmatizing them as a source of threat. Consequently, out-group members become the object of manipulation and vengeful attitudes. By contrast, in-group members are treated leniently even when shown engaging in unfair behavior.

Human beings experience an action-perception coupling in which both the actor and the observer tend to share the same neural networks. This seems to be one of the central mechanisms underlying empathy. However, this action-perception coupling seems to be less evident with out-group dyads, particularly in individuals with a “partisan” mindset. These individuals experience difficulties in developing a neural connection with others, even when witnessing suffering. For example, when individuals observe images of out-group members in pain, they have decreased activation in pain-related brain regions compared with in-group faces, typically in the so-called pain matrix – the anterior cingulate and anterior insula.<sup>8</sup>

### How to counteract the T.R.U.M.P. mindset?

The relevant question now for the socially responsible psychologist, clinician and citizen is to know if there is anything we can do to counteract the current T.R.U.M.P. mind-brain pandemic. Fortunately, there is now abundant evidence that our brains are highly plastic, and can adapt in response to psychological, social and contextual changes. We will briefly illustrate three take-home messages that are well grounded in both clinical evidence and neuroscientific research.

#### *Modifying the attentional biases*

A “threatening” mindset can be counteracted by persistently redirecting attention away from “danger/fear” toward cues of “safety”. Clinical interventions such as “Attentional Bias Modification” are effective in decreasing the state of vigilance, increasing positive search and reverting the brain changes caused by over-anxiety.<sup>9</sup>

#### *Providing a nurturing environment*

The importance of nurturing contexts in reversing the neurotoxic effects of chronic and acute stress has been repeatedly demonstrated. Interventions intended to promote kindness, gratitude and optimism (e.g., “Positive activity intervention”), are particularly effective in reducing some characteristics of T.R.U.M.P. mindset (e.g., threatening, unforgiving).<sup>10</sup>

#### *Increasing interpersonal sensitivity*

Finally, exposing individuals to diverse interpersonal contexts and providing training in empathy may help to increase out-group sensitivity and prevent the growth of narcissistic, vengeful and manipulative attitudes.<sup>11</sup>

As political neuroscience comes of age, we are gaining a clearer understanding of some of the mind-brain characteristics behind different political attitudes. More importantly, we are starting to understand the mechanisms responsible for a *Threatening, Reactionary, Unforgiving, Machiavellian* and *Partisan* (T.R.U.M.P.) mind-brain pattern. But above all, by building on evidence from psychology and neuroscience we can start to design strategies to promote a *Giving, Affectionate, Nurturing, Decentered, Humanistic and Interpersonal* brain (G.A.N.D.H.I.). Given the “coincidence” of this acronym, let us close with the wise reminder by Mahatma Gandhi: “*An eye for an eye will leave the whole world blind*”.

### Conflicts of interest

The authors declare no conflicts of interest.

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