

The promise and problems of the neuroscientific approach to emotions

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In recent years, scholars of international relations have increasingly recognized that emotions are an ineradicable aspect of world politics that rightly warrant our scholarly attention. In this Forum Section, Crawford and Mercer build on earlier work on the emotional experiences of individuals in international relations to examine questions more readily associated with the specifically international aspects of world politics: Crawford by exploring the institutionalization of fear and empathy, and Mercer by interrogating the idea of group-level emotions. Aside from this turn to consider the multiple levels at which the emotions operate in international relations, however, what is especially notable about both lead essays is the extent to which they draw on recent findings in the neurosciences to bolster their arguments. Thus, while Mercer (2014, 515–35) refers to the roles played by mirror neurons and the hormone oxytocin in producing and transmitting emotions within groups, Crawford (2014, 535–57) argues that a full appreciation of the contribution that the emotions make to world politics requires us to understand the neurobiological processes that underpin them.

While it is undoubtedly the case that advances in the neurosciences have contributed to a deeper understanding of the role played by the emotions in international relations, these types of scientific findings bring with them serious methodological challenges for scholars of international politics. As Hutchison and Bleiker (2014, 491–514) argue, among the most pressing issues facing scholars of the emotions in international relations are those that concern method. If Crawford is right to argue that analysing the emotions requires some discussion of neuroscience, how ought we to go about doing this? Must those of us engaged in studying the emotions in international relations all become experimental political scientists? Should we be working to establish a new sub-field of neuro-International Relations akin to the emergent area of neurophilosophy? And how much can neuroscientific experiments on individual human brains tell us about collective emotions in international relations?

In this commentary, I thus explore the possible parameters within which scholars of international relations might draw on the neurosciences in their research on the emotions. I argue not only that the experimental methods of the neurosciences provide us with key facts that are essential to understanding the emotions as they are experienced by individuals, but that recent developments in social neuroscience have the potential to reveal previously hidden, inaccessible, and unexplored aspects of collective emotions. Yet, at the same time, I sound a note of caution: despite the promise that the neurosciences hold for better understanding individual and collective emotions, it does not follow that we all need to become neuroscientists, or that neurological findings are a substitute for social research.

The neuroscientific approach to political emotions

In the past two decades, increasing numbers of scholars have acknowledged the merits of experimental enquiry for the study of political science and international relations, in the form of controlled laboratory experiments, experimental surveys, or field experiments (Druckman *et al.* 2011, 6). Experimental findings, they argue, can facilitate the making of causal inferences, guide the development of theory, and, perhaps most significantly of all, provide ‘stubborn facts – that is to say, reliable information about cause and effect that inspires and constrains theory’ (Druckman *et al.* 2011, 3). Where the study of the emotions is concerned neuroscientific results produced by functional magnetic resonance imaging (fMRI), neuropsychological and neurobiological measurements and tests, and psychological surveys have revealed key facts about how the emotions function within the human brain that are of direct relevance to the study of international politics. For example, by revealing the cognitive contexts in which particular parts of the brain associated with the emotions are activated, fMRI experiments and studies of patients with specific brain injuries have demonstrated that emotion actually ‘assist[s] the reasoning process’ (Damasio, 2005, x–xi). That is, contrary to the assumption that reason is distinct and separable from emotion prevalent in most theories of international politics, neuroscience has provided the ‘stubborn fact’ that reason and emotion do not exist in a dichotomous relationship.

Despite this advantage, however, experimental methods also pose serious challenges for the study of international relations. The first challenge is a purely practical one: neuroscientific inquiry requires expensive infrastructure and time-consuming specialist training. It is simply impractical to suggest that all scholars of the emotions in international relations ought to gain the relevant scientific expertise and establish their own laboratories. However, this problem has been overcome in at least one other cognate field of inquiry, philosophy. In recent years, a ‘growing movement’ has appeared in the field of philosophy that

seeks 'to bring neurological issues to bear on the grand old questions concerning the nature of the human mind' (Panksepp 2005, 5). While a new generation of experimental philosophers have begun, once more, to undertake the systematic empirical study of the human mind by conducting their own scientific experiments, the new empirical philosophers 'make use of empirical results that have been acquired by professional scientists' (Knobe and Nichols 2008, 3), thereby circumventing the need for specialist training in the natural sciences and the acquisition of sophisticated and expensive pieces of equipment.

The second challenge relates to the problem of translating laboratory-generated experimental findings into the 'real world' of international politics, otherwise known as the problem of 'external validity'. In particular, it might be reasonably argued that the sorts of thought experiments conducted by neuroscientists to explain the bases and functions of the emotions in the human brain do not accurately reflect decision-making processes as they take place in normal world affairs. Singer (2011) raises precisely this objection in his critique of the use of neurological experiments by Greene (2008) and others to demonstrate the role that emotions play in making moral decisions. In defending his rationalist approach, Singer (2011, 195) argues that thought experiments conducted by neuroscientists and psychologists bear 'no resemblance to anything likely to have happened in the circumstances in which we and our ancestors lived'. That is, beyond asking decisionmakers to go about their usual business from within the confines of an MRI machine – which itself would be creating an extremely artificial decision-making environment – Singer (2011) suggests that scientific evidence of neurological and psychological processes cannot be used to demonstrate that emotions were involved in making 'real world' decisions. The problem here is one of replication and control: because we cannot replicate real-world decisions in the laboratory, we cannot control for intervening variables, thus making general claims about causality potentially unsafe.

As Tetlock (1998) argues in his work on the contribution that social psychology might make to understanding world politics, however, this limitation is not reason enough to entirely dismiss experimental findings. After all, he argues, we do not reject the use of history from our analyses, even though it cannot be replicated or compared with control groups (Tetlock, 1998, 870). Rather, it simply serves as a caution against assuming that a direct transposition of laboratory findings to the real world is possible and calls on us to couple experimental results with observations and conclusions derived from using different methods of data collection.

The third problem associated with the neuroscientific approach is that 'neurons do not tell the whole story of world politics' (Crawford 2014, 535–57). Human interactions, as Wendt (1999, 1) notes, are not shaped by 'materialist forces' or 'given by nature' but are constructed by

‘shared ideas’. That is, what makes us different as human beings from other aspects of nature is the fact that our actions are ‘meaningful and historically contingent’ (Bevir and Kedar 2008, 505). This fundamentally anti-materialist view of human existence comes into direct conflict with the essential materialism of the neurosciences (Gazzaniga in Snead 2007, 1278; Wendt 2006, 183). As Gazzaniga (in Snead 2007, 1278) notes, “‘98 or 99 percent” of cognitive neuroscientists share a commitment’ to the idea that ‘all aspects of the mind are ultimately reducible to the structure and function of the brain’ (Snead 2007, 1277). This notion, that the only thing that exists is matter, in this case in the form of the individual human brain, is clearly at odds with the idea that human interactions are socially and historically contingent and shaped by ideas.

Neuroscience and the links between individual and collective emotions

The final challenge associated with applying neuroscientific methods to the study of emotions in international relations thus concerns the relationship between individual and collective emotions. In one sense, a straightforwardly materialist understanding of the emotions, with its emphasis on the neural processes of the individual brain, appears unable to account for collective emotions insofar as they are more than the sum of individual members’ experiences. Yet, at the same time, a small but increasing number of neuroscientists have recently become ‘convinced that all social behaviour is reflected, at one level or another, in the brain’ (Holmes 2013, 2). Social neuroscientists have thus posited the notion of ‘neuroplasticity’ to describe the process by which brain structures contribute to our abilities for social interaction (Cacioppo and Berntson 2004, 1) and, in return, how social contexts shape brain structure (Holmes 2013, 2). If they are in fact right to suggest not only that ‘brain structures affect social behaviour’ but that neuroplasticity means that human brains are affected by social behaviour (Holmes 2013, 2), then studying individual human brains may well provide us with important insights into the nature of the collective emotions.

Yet within an anti-materialist, social account of the emotions in international relations, the contribution of neuroscientific methods will always be limited. After all, methods are simply forms of data generation and collection; what matters is not how data is collected so much as how it is interpreted to explain its meaning (Bevir 2010, 4). The interpretivist approach requires the social scientist to consider the contexts in which data has been generated and to be mindful of that data’s broader applicability. Where data generated through experimental inquiry is concerned, the interpretive approach requires us to distinguish between ‘stubborn facts’ and contextual facts. Stubborn facts

are generated in contexts that facilitate generalizability and therefore must necessarily constrain our theories of the emotions in international relations. By contrast, contextual facts, generated in particular experimental, historical, and social contexts stand alongside other forms of data about ideas, norms, and beliefs. Together, stubborn and contextual facts form the webs of meaning we use to explain and interpret actions and interactions in international relations. Where the emotions are concerned, they allow us to take heed of marvellous and ground-breaking discoveries in the neurosciences but without donning white coats ourselves or falling into the trap of thinking that we humans are nothing but brains.

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On being convinced: an emotional epistemology of international relations

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I am convinced that emotion plays a central role in world politics. But I am not sure why I am convinced of this. In fact, I am increasingly skeptical of my own conviction. To establish emotions' significance for world politics requires a logically robust theory of the relationship among emotion, collectivities, and action. The theories we use for this in international relations (IR) are logically unstable. Even the best work on emotion collapses without much pressure. Even my own work collapses. So why do I remain committed to the idea that emotions are central forces in world politics?

In this commentary I reflect upon my own stubborn commitment to this evidently fragile idea. Since I am not alone among IR scholars in remaining committed, against reason, to favored ideas, this exercise is not just auto-ethnographic. It explores the broader scholarly experience of 'being convinced'. It also yields two theoretical provocations regarding emotion. The first, ironically, is that emotion may matter even more than our (unstable) theories have suggested. Emotions may shape not just world politics but also our knowledge of it. IR rests on an emotional epistemology. Second, though, those who are not already (emotionally) convinced of emotion's importance in world politics are unlikely to be persuaded by recent state-of-the-art neuroscience-based research. More logically robust arguments may be possible through a theoretical focus on affect.