The Many Faces of Empathy: Biological, Psychological, and Interactional Perspectives

In 1872, Charles Darwin published *The Expression of the Emotion in Man and Animals* (1). In it, he sought to link certain movements, such as humans raising their eyebrows when surprised, to the concept of evolution and a link to common animal ancestry. Darwin’s impact on the psychology of the emotions continues to be felt to this day and his book is still considered a classic. One of the problems Darwin faced in studying animal species other than humans was the lack of intersubjectivity, that is, he was unable to establish shared consciousness with the species he studied. Although there might be universals in facial expression across species, Darwin was unable to interview his subjects or inquire as to whether their emotional experiences were the same or different from his own. Thus, he was forced to rely on direct observation without the ability to confirm what he saw.

The problem of intersubjectivity was taken up 3 decades later, in 1909, by Edward Titchener, a British-born psychologist who was teaching at Cornell University. Relying on previous work by German scholars studying the aesthetic appreciation of architectural form, Titchener attempted to capture the resonance of one person (eg, a therapist) with the feeling and/or emotions of another (a patient). Titchener coined the term “empathy” to describe the capacity of human beings to be in tune with another’s emotions and to know and understand one another through reflection and shared experience (2).

Still later, in 2010, neuroscientists discovered the existence of “mirror neurons,” pathways in the brain that mimic in one person the actions of another (3). This exciting discovery provided a link which confirmed that there is a neurobiological connection between the psychological concept of resonance and the physiological response to observing another’s distress. For example, experiments using functional magnetic resonance imaging have shown that the neurons which are activated in a subject whose finger is being painfully pricked are also activated in a subject simply observing the procedure, thus providing a biobehavioral basis for research on empathy.

In this special issue of the *Journal of Patient Experience*, we explore 3 of the many faces of empathy in medicine. The first treats empathy as a capacity for understanding another’s emotional state (cognitive empathy), the second looks at empathy as a response to another’s expression of emotional distress and suffering (empathic communication), and the third looks at how empathic responses are mirrored at the neuronal level of brain activity (biobehavioral empathy). Cognitive empathy denotes a capacity for empathy, while empathic communication is viewed as emergent and contingent upon coparticipation in real-time face-to-face interaction. Biobehavioral empathy utilizes the brain activity of one person (a therapist) as she or he responds to the suffering or distress of another (a patient). Patterns of brain and physiological activity (eg, the idea of 2 hearts beating as 1) in turn are seen as open to improving self-awareness and responsiveness to patients’ expressions of emotional distress. The differences in these 3 perspectives are not trivial nor are the implications of research based on them. Each of contributing authors to this issue provides an overview of their basic assumptions about empathy and the methods and outcomes of studying this complex phenomenon. We also include the perspectives of a patient and a physician educator who describe what empathy has meant to them while receiving or teaching others about its importance in medical care.

In an age of rapid technological advance like none other, recognizing the importance of empathy and the emotions in
everyday social interaction and relationships is of great value at all levels in creating and maintaining a civil society. In the case of medicine, resonating with and accurately communicating one’s response to a patient’s immediate suffering is part of the larger task of building therapeutic or healing relationships, an aspiration that has existed in the profession for millennia.

In summary, it is no exaggeration to assert that empathy, and the ability to reflect on our own and others’ feelings and emotions, is truly a biopsychosocial phenomenon. Its many faces and facets reflect the beauty and complexity of what it means to be human.

We hope you will embrace and enjoy the diversity and creativity of the scholarship represented in this special issue.

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2. Greiner R. 1909: The Introduction of the Word ‘Empathy’ into English BRANCH: Britain, Representation and Nineteenth-Century History. Ed. Dino Franco Felluga. Extension of Romanticism and Victorianism on the Net. Accessed February 10, 2017.
3. Mukamel R, Ekstrom AD, Kaplan J, Iacoboni M, Fried I. Single-neuron responses in humans during execution and observation of actions. Curr Biol. 2010;20:750-6.

ON THE COVER
“A couple huddling for warmth in the chill of an early morning sunrise at the south rim of the Grand Canyon”
Photo Credit, Richard M. Frankel