# INTRODUCTION TO SOCIAL COGNITIVE NEUROSCIENCE

Aristotle long ago characterized man as a 'social animal.' Social psychologists have spent a century classifying the countless interpersonal and intrapersonal factors that guide our thoughts, feelings, and behaviors throughout daily life. It is only in the past 15 years since the dawn of the twenty-first century that social psychologists have turned to neuroscience as a new type of tool to investigate how our brains respond to the social world. Just like social psychology itself, this new field of social cognitive neuroscience extends broadly across many topics that do not always seem social at first blush but that are critical to successfully navigating our social lives.

The first part of this section deals with the different ways in which people are sensitive to pains and pleasures of social living. Humans are remarkably sensitive to the slings and arrows of social interactions whether they involve unfair treatment (**Fairness and Inequity Aversion**), social rejection (**How the Brain Feels the Hurt of Heartbreak: Examining the Neurobiological Overlap Between Social and Physical Pain**), or other social stressors that can lead to deleterious health outcomes (**Neurocognitive and Physiological Mechanisms Linking Stress and Health**). In contrast, neural mechanisms for reward and incentive motivation that respond to reinforces like money, chocolate, and sexual cues also respond to the positive social regard of others (**Social Reward**), cooperating with another (**Cooperation and Fairness**), or even helping others at one's own expense (**Prosocial Motivation**). Social pains and pleasures are powerful forces that motivate us to build social bonds and stay connected.

The second part of this section has several articles focusing on the different functions of the 'self.' Although self-processes may appear to be exclusively intrapersonal, rather than interpersonal, there are countless findings demonstrating that our self-representations are created, maintained, and modulated by various social factors such as feedback and the desire to fit in and share the values of important groups. Some of the articles in this part focus on the knowledge that we have about ourselves and develop through adolescence (**Self-Knowledge**, **Puberty, Peers, and Perspective Taking: Examining Adolescent Self-Concept Development Through the Lens of Social Cognitive Neuroscience**). One article reviews how our emotions emerge out of our continual understanding of what is happening around us as it relates to our current goals and concerns (**Emotional Experience**). Other articles focus on our capacity to control ourselves whether it is our impulses (**Self-Regulation and Self-Regulation Failure**), emotions (**Emotion Regulation**), or attention (**Mindfulness: Mechanism and Application**) that needs controlling. If we were not able to know or control ourselves, our behavior in social settings would be far more unpredictable and thus problematic for our ability to get along with others.

The third part of this section explores the basic mechanisms of social perception. There are various specialized mechanisms in the human brain for detecting and quickly interpreting socially meaningful cues in our environment. These articles focus on the perception of faces (**Face Perception: Extracting Social Information from Faces: The Role of Static and Dynamic Face Information**), bodies (**Body Perception**), and emotions (**Emotion Perception and Elicitation**, **The Amygdala and Social Perception**) as basic cues. There are also articles that focus on the motions of the body in terms of biological motion (**Biological Motion**), action perception (**Action Perception and the Decoding of Complex Behavior**), and the mirror neuron system (**The Use of Brain Imaging to Investigate the Human Mirror Neuron System**). Finally, there are two articles that focus on more abstract perceptual processes including trust perception (**Trust Perception**) and observational fear learning (**Observational Fear Learning**).

The fourth part of this section focuses on social thinking. Beyond our basic mechanisms for perceiving a social world, there are additional networks and processes critical to thinking about other people, their enduring characteristics, and their momentary thoughts and feelings. Articles that focus on the internal mental states of others examine mentalizing (**Mentalizing**, **Strategic Mentalizing: The Neural Correlates of Strategic Choice**), whereas social knowledge and attribution (**Person Knowledge and Attribution**, **Social Knowledge**, **Social Versus Nonsocial Reasoning**, **Social Decision Making**) focus on more general knowledge about people and

the social world. More specialized forms of social cognition are involved in empathy (**Empathy**), compassion (**Compassion**), dehumanization (**Dehumanization**), and moral thinking (**A Neural Network for Moral Decision Making**). Newer areas examine more interactive aspects of social cognition (**The Neural Correlates of Social Cognition and Social Interaction**) and its cultural context (**Cultural Neuroscience**). Other articles examine the development of normal social cognition (**The Social Brain in Childhood and Adolescence**) as well as the disorders for which social cognition does not function properly (**Neural Correlates of Social Cognition Deficits in Autism Spectrum Disorders**, **Mentalizing and Psychopathology in Schizophrenia, Depression, and Social Anxiety**). Two final articles in this section examine exciting new directions in social cognition. One article (**The Default Network and Social Cognition**) tries to make sense of the surprising finding that the same regions that are recruited during social thinking are also reliably activated anything we mentally rest for a few seconds. The other article examines the distinction between processes for social thinking that are intuitive and automatic on the one hand or deliberative and reflective on the other (**Dual-Process Theories in Social Cognitive Neuroscience**).

The fifth and final part of this section focuses on attitudinal and evaluative processes (**Attitudes**). Attitudes and evaluations are the way we keep track of what matters to us in the world and which ideas, people, and groups we align ourselves with or against. One article focuses on the roles that attitudes and evaluations play in the stereotyping and prejudice that occurs between members of different groups based on race, gender, age, etc. Two other articles focus on the ways by which attitudes change either through intrapsychic processes like cognitive dissonance (**Attitude Change and Cognitive Consistency**) or through interpersonal persuasion processes (**Social Influence and Persuasion and Message Propagation**).

Together, these articles reflect an exciting look at a broad and important new area of neuroscience research. Universities have long treated life sciences and social sciences as separated by an impenetrable boundary. Social cognitive neuroscience lives at the intersection of these disciplines and is continually creating exciting new insights into who we are as a species as a result of the social contexts we live in.

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