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Sommario/riassunto	Despite the centrality of rationality to our identity as a species (let alone the scientific endeavour), and the fact that it has been studied for several millennia, the present state of our knowledge of the mechanisms underlying logical reasoning remains highly fragmented. For example, a recent review concluded that none of the extant (12!) theories provide an adequate account (Khemlani & Johnson- Laird, 2011), while other authors argue that we are on the brink of a paradigm change, where the old binary logic framework will be washed away and replaced by more modern (and correct) probabilistic and Bayesian approaches (see for example Elqayam & Over, 2012; Oaksford & Chater, 2009; Over, 2009). Over the past 15 years neuroscience brain imaging techniques and patient studies have been used to map out the functional neuroanatomy of reasoning processes. The aim of this research topic is to discuss whether this line of research has facilitated, hindered, or has been largely irrelevant for understanding of reasoning processes. The answer is neither obvious nor uncontroversial. We would like to engage both the cognitive and the neuroscience community in this discussion. Some of the questions of interest are: How have the data generated by the patient and neuroimaging studies: • influenced our thinking about modularity of deductive reasoning • impacted the debate between mental logic theory, mental model theory and the dual mechanism accounts • affected our thinking about dual mechanism theories • informed discussion of the relationship between

induction and deduction • illuminated the relationship between language, visual spatial processing and reasoning • affected our thinking about the unity of deductive reasoning processes Have any of the cognitive theories of reasoning helped us explain deficits in certain patient populations? Do certain theories do a better job of this than others? Is there any value to localizing cognitive processes and identifying dissociations (for reasoning and other cognitive processes)? What challenges have neuroimaging data raised for cognitive theories of reasoning? How can cognitive theory inform interpretation of patient data or neuroimaging data? How can patient data or neuroimaging data best inform cognitive theory? This list of questions is not exhaustive. Manuscripts addressing other related questions are welcome. We are interested in hearing from skeptics, agnostics and believers, and welcome original research contributions as well as reviews, methods, hypothesis & theory papers that contribute to the discussion of the current state of our knowledge of how neuroscience is (or is not) helping us to deepen our understanding of the mechanisms underlying logical reasoning processes.