neurosciences by digitalizing the massive empirical data available and developing highly sophisticated tools, such as computer models and simulations, to achieve an integrated knowledge of the brain (Markram 2013).

The development of predictive computational neuroscience is usually justified for both epistemological (i.e., the intrinsic limitation of the empirical methodology) and practical (i.e., the need for new therapeutic and clinical applications) reasons. We think that the proposed computational shift raises the need for a specific neuroethical reflection.

In the poster we propose a neuroethical analysis of brain modeling and simulation (BMS), making a distinction between practical and conceptual considerations. The poster stresses the need for conceptual examination in order to make clear the feasibility and the potential benefits of BMS (Farisco, Evers, and Salles 2016).

Starting from a general neuroethical assessment of BMS, the poster investigates its potential impact on our understanding of moral judgment, defined as a special type of interaction with the world mediated by the brain. We note that an adequate simulation of moral judgment needs to include also extracerebral elements in the model, namely, the interaction of the brain with the rest of the body (e.g., gut and endocrine system) and with the external environment (e.g., social and cultural world).

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A Penny for Your Thoughts: Valuation Underwrites Normative Choice

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Background: Neuroeconomists typically focus on the subjective valuation of physical goods, asking, for example, how an agent's brain encodes the subject value of given food item. On the goods-based model of decision making (Padoa-Schioppa 2011), the value of a good is computed using multiple determinants such as the nature of the commodity in question (a sandwich), its associated cost (price), the agent's motivational state (hunger level), and so on.

Problem: Many choices of interest involve a normative component, that is, a consideration of what one ought to do. For instance, a decision to eat meat in one's sandwich involves not only assessments about flavor and price, but also a concern about whether or not it is morally acceptable to eat meat.

Hypothesis: Agents make choices involving normative features by using both physical and abstract determinants. In addition to encoding the value of physical determinants, the brain encodes the value of abstract determinants such as whether it is right or wrong to do a given thing.

Proposal: A standard technique to measure the neural representation of subjective value asks participants to choose between alternative offers of physical items, uses the participants' choices to infer the subjective value of each item, and measures these values against participants' neural signals (for a review, see Padoa-Schioppa 2011). Our adapted methodology aims to establish participants' valuation of abstract principles and to measure these values against their corresponding neural signals. Functional magnetic resolution imaging (fMRI) studies suggest that the orbitofrontal cortex (OFC) encodes participants' valuation of physical goods and "willingness to pay" for physical goods in everyday economic transactions (Plassmann, O'Doherty, and Rangel 2007). We predict a corresponding relationship between the values of abstract principles and their corresponding BOLD signal in the OFC.

Discussion: We propose a neuroeconomic theory of decision-making that extends to normative choice. General decision-making processes underwrite the framework of normative choice, where the brain encodes the subjective value of both physical goods and abstract principles. Our account provides a comprehensive alternative to the "low-hanging fruit" approach currently favored by researchers in the neuroscience of morality, and offers important implications for our understanding of how normative choice develops in individual agents (Savulescu et al. 1865).

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Publish or Perish—or Dope?

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Recently, Duke University has become the first academic institution to our knowledge that explicitly