Is reason the master of emotions, or are emotions the master of reason?
By Daphne Jong

Reason and emotions are conflicting entities that wage battle for the overall dominion of the psyche. The notion that one must strike a balance between abiding to intuitive processes with the religion of rationality is deeply rooted in Western philosophy. Proponents of sentimentalism like Hume and Smith contended that emotions are the basis of moral judgment whilst rationalists like Kant and Plato believed in moral judgment as a rational enterprise; of deriving emotions based on reason. Plato likened reason and emotions to two horses pulling a charioteer in opposing directions. His allegory is reinforced by dual-process theories, which posit the existence of two systems of judgment distinguished by intuition and reasoning. The past decade has witnessed the rise of conflicting theories regarding the nature of each system and its influence over human behaviour. Advancements in the behavioural sciences seek to override the age-old assumption that human beings are rational agents whose deviation from a rational state is an act of emotional interference. Emotion is not the antagonist of reason, nor does reason necessitate divorce from emotion. Reason and emotions often interact: emotions influence our ability to reason and reasoning affects our emotional processes.

Emotions are the root of reason. Fear drives our ability to make rational decisions. When faced with the presence of biologically significant stimuli like pythons, fear motivates us to retreat rather than approach. Fear has triggered a rational response, whereby retreating furthers one's ability to survive. Seligman hypothesized that human beings are predisposed to fear as part of evolutionary history; organisms that learned to fear environmental threats increased their chances for survival. Emotions hold an evolutionary advantage in the context of natural selection. Species who have evolved to care for their offspring ensure the survival of their genetic material whilst species primed to eat their offspring are prone to extinction. Our capacity for emotion is the harbinger of reason. Reason is not involved in the decision to care for our offspring; it is guided by love and affection. The act of retreating from a python is driven by fear, not the consequence of a rational calculation that gauges the probability of its threat to your being. By abiding to the laws of intuition, a rational outcome is achieved.

Rationality as an outcome of intuition is reminiscent of the processes involved in making moral decisions. When we contemplate harming an individual, our brains automatically generate a negative emotion; a visceral signal that discourages violence (Greene et al, 2001). Haidt argued that emotionally driven intuition is the basis of morality and that reason comes after a moral decision has been made: human beings are intuitive by nature, not rational. When presented with moral questions like whether one would have sex with their sibling or a dead chicken, Haidt found that people would default upon their intuition before supporting their answer with reason. Such findings are amenable to Mercier and Sperber's argumentative hypothesis, where the function of reason is to devise and evaluate arguments designed to persuade. Reason justifies our intuitive beliefs and convinces others of its legitimacy. People insist on following their intuition; the 'immorality' of incest is emotionally charged and will continue to evoke feelings of disgust regardless of reasons that suggests otherwise. Haidt attributes this dogmatic insistence to the evolutionary hypothesis: our ability to influence others is a key advantage in the competition for social status. Reason is the allegorical spin-doctor, evolved to appeal to intuitions whose decision reason must defend.

Reason is charged with monitoring our emotions, governing the thoughts and actions that are to be expressed as behaviour. The bat-and-ball problem features reason as the dominating system, equipped with the ability to impose logical analysis. However, reason is computationally expensive. We are only capable of overcoming faulty intuition

if we consciously evaluate information before relying on heuristics. Half the students from prestigious tertiary institutions like Harvard, MIT and Princeton answered the simple algebraic problem 'how much does a ball cost if a bat costs $1 more than the ball and the bat and ball costs $1.10' incorrectly because they trusted their intuition at the expense of reason. Reason is depicted as a critic that challenges our emotions but it often becomes an advocate of intuition, forming post-hoc rationalizations by proffering arguments that are aligned with our intuitive beliefs. Paul Slovic believed this was a consequence of the affect heuristic. Our attitudes and preferences are ultimately shaped by emotions as we make evaluative conclusions based on positive or negative associations with environmental stimuli. The emotional attitude we harbour towards E numbers determines our judgment of its health risks and benefits much as financial analysts base their risk analysis of unfamiliar stocks on a global affective attitude. By studying the financial sector, Ganzach (2000) established a strong negative correlation between perceived financial risk and financial return that is consistent with the affect heuristic. Emotion influences our reasoning because reason is undemanding and consents to the suggestions of our emotions without evaluating it against the relevant statistics, giving rise to cognitive biases.

Reasoning can give rise to cognitive biases because arguments are designed to support our intuition, resulting in the distortion of mental representations and allowing faulty beliefs to prevail. Tversky and Kahneman illustrate the role of emotions in judgment and its incompatibility with reason using the 'Linda problem', where the depiction of the fictitious character, Linda, as an outspoken, 31-year-old philosophy major concerned with issues of social justice as a student and participant in anti-nuclear demonstrations caused participants to defy basic laws of probability. Around 90% of participants predicted the likelihood of Linda being a bank teller and active in the feminist movement as greater than being a mere bank teller even though reason would argue that the probability of two events occurring simultaneously is always less than the probability of either event being true. The participants were guided by cultural expectations towards certain types of people, causing them to form an instinctive judgment in favour of abstract reasoning. The conjunction fallacy is one of the many biases that distort our thinking, appealing to our system of reason to endorse a heuristic-derived conclusion based on intuition. Tversky and Kahneman surmise that 'judgments are all based on data of limited validity' and are 'processed according to heuristic rules.' By seeking the closest resemblance between Linda's personality and her behaviour rather than calculating probability, emotion dominates reason.

Emotion tends to take charge during decision-making because the cross-benefit calculus of reason can cripple us into a state of indecision, a hypothesis inspired by the case of Phineas Gage. Damage to the prefrontal cortex – a region of the brain responsible for the regulation of emotion – impeded Phineas Gage's ability to learn from mistakes, suggesting that emotion may be an essential component to reason. Damasio built upon this hypothesis by studying patients with brain lesions that impair the emotional processes. Relief from feeling did not transform patients into paragons of reason; their lives swiftly fell apart from ineffective decision-making. Patients vacillated over trivial decisions like where to eat lunch; their brains were in a constant state of decision, incapable of establishing a preference to avoid the decision-making dilemma. Seneca claimed that 'reason wishes the decision that it gives to be just; anger wishes to have the decision which it has given seem the just decision' but the opposite proves to be true. Emotion is the superior motivation. Making a decision entails serving an objective supplied by emotion, forming the basis for our daily actions. Operant conditioning, the framework by which we learn from past errors, only acts upon emoting entities and the

absence of emotion left Damasio's patients adrift without purpose, immune to the consequences of their actions.

Human beings have evolved in an environment where intuition is crucial to our survival. Emotion is not merely the master of reason; it is a logical response to a cause, prompting us to advance our needs and interests. Craving for a promotion motivates the reasoning system to devise a novel solution to satisfy that goal. Although emotion is prone to logical misfires, if we relied solely on reason to guide our decisions, we would cease to function much as Damasio's patients did. Reason cannot be a motive to the will; it is led by emotions and used to justify its compulsions. Emotion acts as the driving force behind reason, creating a purpose to strive towards and leaving reason to fulfil the desires set forth by emotion. As Hume stated: 'reason is, and ought only to be the slave of passions.'

References

Damasio, A. R. (1994*). Descartes' error: emotion, reason, and the human brain*. New York: Putnam.

Ganzach, Y. (2000). Judging risk and return of financial assets. *Organizational Behavior and Human Decision Processes*, 83(2), 353-370.

Greene, J. (n.d.). Joshua Greene's Homepage. *William James Hall Home Page*. Retrieved June 18, 2013, from http://www.wjh.harvard.edu/~jgreene/

Greene, J., Sommerville, B., Nystrom, L., Darley, J., & Cohen, J. (2001). An fMRI Investigation of Emotional Engagement in Moral Judgment. *Science, 293*, 2105-2108.

Haidt, J. (2001). The emotional dog and its rational tail: A social intuitionist approach to moral judgment. *Psychological Review, 108*, 814-834.

Herzog, H. (n.d.). Reason and emotion: A note on Plato, Darwin, and Damasio. *Psychology Today*. Retrieved June 16, 2013, from http://www.psychologytoday.com/blog/one-among-many/201006/reason-and-emotion-note-plato-darwin-and-damasio

Kahneman, D. (2011). *Thinking, fast and slow*. New York: Farrar, Straus and Giroux.

Krakovsky, M. (n.d.). How Do We Decide? | Stanford Graduate School of Business.*Stanford Graduate School of Business*. Retrieved June 20, 2013, from http://www.gsb.stanford.edu/news/bmag/sbsm0802/feature-babashiv.html

Mercier, H., & Sperber, D. (2011). Why do humans reason? Arguments for an argumentative theory. *Behavioral and Brain Sciences, 34*, 57-111.

Seligman, M. (1971). Phobias and preparedness. *Behavior Therapy, 2*, 307-321.

Seneca, L. A., Cooper, J. M., & Procopé, J. F. (1995). *Moral and political essays*. Cambridge: Cambridge University Press.

Tversky, A., Kahneman, D., & Slovic, P. (1982). *Judgment under uncertainty: heuristics and biases*. Cambridge: Cambridge University Press.