Chapter 8

Moral Dilemma Judgment

The purpose of this chapter is to discuss how neurosciences may contribute to the understanding of moral by studying Electroencephalogram (EEG) activity associated with moral dilemma judgment.

Greene *et al.* (2001) were among the first to use functional magnetic resonance imaging (fMRI) to study moral dilemma judgment. In two other papers (Greene *et al.*, 2004; Shenhav and Greene, 2010), they explore the cerebral areas involved in judgment of *personal* (PD) and *impersonal* (ID) like the trolley dilemma (as ID example) and the foot bridge dilemma (as PD example):

The trolley dilemma: (F) A runaway trolley is headed for five people who will be killed if it proceeds on its present course. (A) The only way to save them is to hit a switch that will turn the trolley onto an alternate set of tracks where it will kill one person instead of five. (D) Is it appropriate to switch the tracks?

The foot bridge dilemma: (F) Similar to the trolley dilemma, the trolley is on a path that will kill five people. (A) The five people could be saved if you push a stranger in front of the trolley; however, the stranger would be killed. (D) Is it appropriate to push the stranger?

Such dilemmas have the following structure:

— proposition F describes a situation that implies a social loss (dead) of a given value (five people);
— proposition A describes an action to avoid the social loss but at a personal risk of a given intensity (hitting a switch or pushing a stranger) and