No Regrets
Or: Edith Piaf Revamps Decision Theory

Frank Arntzenius
Dept. of Philosophy
Rutgers University
26 Nichol Ave.
New Brunswick, NJ 08901

Abstract

Edith Piaf is famous for her chanson "Non, je ne regrette rien". In this paper I will suggest that rational people should not violate Piaf's 'No Regrets' maxim, that is to say, I will suggest that a rational person should not be able to foresee that she will regret her decisions.

A version of Piaf's maxim is the principle which says that according to any rational person the expectation value of the future desirability of an action must equal its current desirability. I call this principle Desire Reflection. I will argue that standard evidential decision theory (Jeffrey's decision theory) violates Desire Reflection. The essential reason for this violation is that evidential decision theory uses conditional probabilities in its expected utility formula, and the expectation value of future conditional probabilities does not generally equal the current conditional probability.

I will next argue that standard causal decision theory (as formulated by David Lewis) does satisfy Desire Reflection. The basic reason for this is that it uses unconditional probabilities (of causal dependency hypotheses) in its expected utility formula, and it follows from van Fraassen's Belief Reflection principle that the expectation value of future unconditional probabilities equals the current unconditional probability.

I then discuss a couple of variations on standard decision theories, namely Joyce's and Savage's decision theories, and argue that both satisfy Desire Reflection. However, I then point out that Savage's theory, in its barest form, is incoherent unless a constraint is added as to how to partition the states of the world into situations. I go on to propose such a constraint.

I next discuss a prima facie problem for causal decision theory, namely the problem that in Newcombe type situations evidential decision theorists will, quite predictably, end up richer than causal decision theorists. In response I argue that there are also cases in which the shoe is on the other foot, and hence that this argument does not have much bite.

I then, by means of Andy Egan's 'Psycho Johnny' example, turn to a more serious problem for causal decision theories, namely 'Decision Instability'. Decision Instability amounts to the problem that there are cases in which, as soon as one has made a decision, one regrets it, so that one has a violation of Piaf's maxim. I suggest dealing with this problem by allowing mixed decisions, and suggest a deliberational model (following Brian Skyrms) for handling such problems.

I end by discussing how such a deliberational decision theory relates to game theory.