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**Axelrod thinks that his model of the emergence of cooperation through cultural selection (perhaps even initially natural selection) for the Tit for Tat strategy in iterated prisoner's dilemmas, is at least part of the explanation for the emergence of cooperative strategies in the absence of external coercion, as for example in hunter/gatherer societies. Frank insists that the emergence of Tit for Tat strategies cannot explain a crucial feature of the nature of human cooperation. What is the feature Frank thinks Axelrod's model cannot explain?**

Frank lays out a variety of scenarios where rational, self-interested individuals may act in altruistic ways, listing different explanations given by academics. Included is Axelrod's iterated prisoner's dilemma (PD) simulation, and with it his argument that Tit-for-Tat (TFT), a nice, forgiving and retaliatory strategy whose performance excels in simulation, could account for the emergence of cooperation in humans. Although Frank agrees that TFT's behavior shows reciprocal altruism—cooperation in the first play *and* when the other cooperates in the previous move, in cases where multiple games (iterated PD) are played—, he maintains that it cannot explain certain hard-core altruism; e.g. a single-shot prisoner's dilemma, which Frank frequently exemplifies as tipping in a restaurant during a faraway vacation.

Axelrod's strategies, Frank suggests, can model some forms of emotion—such as sympathy: “Tit-for-two-tats” or aggressiveness: “Two-tits-for-tat.” But Frank points out that “in Axelrod's story, which makes no mention of the emotions, [behavior in situations in which it does not pay] remains a mystery.” In his visiting restaurant example, while a frequent customer may benefit in leaving a good impression with a large tip for the waiter in anticipation of good future service (repeated games), the visiting tourist is incentivized to stiff as they will not visit again (single-shot games). However in real-life visiting tourists do occasionally leave tips, which cannot be explained by Axelrod's models, which assume an iterated PD game.

(229 words)