For cooperative games in which players are identified with their attributes, we introduce the notion of the "hedonic core": there is a linear function on attributes that describes the payoff of each player or group of players. We show that for a class of large games with transferable utility, the hedonic core approximates the core. Equivalence of the core and the hedonic core has two implications: (i) Nontrivial groups of players whose attributes are close will have core payoffs that are close. (ii) The payoff received by a nontrivial group of players with given attributes must be similar in any two utility vectors in the core. Using the notion that a game "exhausts blocking opportunities", we show that if this conditional is satisfied in each of two finite games that weight a particular attribute differently, the hedonic payoff to that attribute is larger (not smaller) in the game that gives it less weight.