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SUBJECT: How a Dealer Feeds Players' Species

In our implementation of Evolution, the Dealer manages all game elements excluding the individual Player strategies. Eventually a player's species need to be fed. The Dealer will initiate this action only after it has turned over all the food cards at the watering-hole and has updated the board according to the information on the revealed cards. The Dealer also takes care of any trait cards that initiate auto-feeding of certain species.

Once the actions are completed, the feeding stage can begin. From the starting player, the Dealer requests each Player to choose their next species to feed in a round-robin fashion. When the Dealer asks the player which species she would like to feed, the Dealer passes the Player their given player-state, a list of the other player-states, and the food available at the watering hole. The dealer continues making these requests and updating the game until the feeding stage ends. The feeding stage ends when there is no food left at the watering-hold board or when all the hungry species or all players are fed.

After each feeding request the Dealer receives from a Player, the Dealer verifies that the request is valid based on the behavioral contracts of "next-feeding" as described in the specifications. Depending on which species a Player decided to feed, the Dealer manipulates the player-states and watering-hold board appropriately. There are four cases to consider:

    A Player chooses to feed a species with a "fat-tissue" trait. The Player returns the species to feed and the amount of fat-tissue food to store. The Dealer, upon receiving this information, subtracts the requested amount of food from the watering hole and adds it to the species food store.
    A Player chooses to feed a species that is a herbivore. The Player returns the species to feed and the Dealer adds one to the species food and subtracts one from the watering-hole board.
    A Player chooses to feed a species with a "carnivore" trait. The Player returns the species to feed, the Player to attack, and the species of the Player to attack. Based on the received information, the Dealer adds one to the carnivores food, updates the player-state of the attacked player and decreases the population of the attacked species by one.
    A Player can choose to not feed any species in which case the Player returns False and the Dealer does not update any player-states.