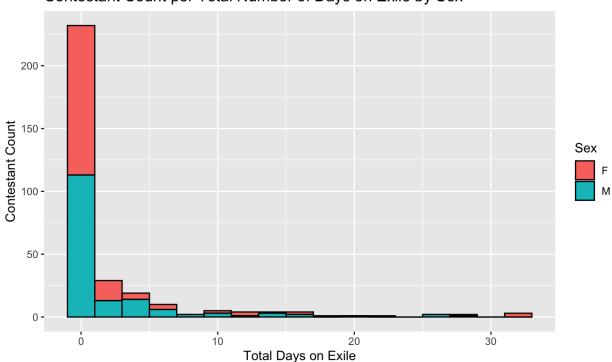
Context

"Exile" days played: Counts days on Exile Island, Redemption Island, Ghost Island, or Edge of Extinction - any days still technically in-game, but not present in the regular game.

The data that created the following plots was isolated so only seasons with some form of "Exile Island" or "Redemption Island" are shown.

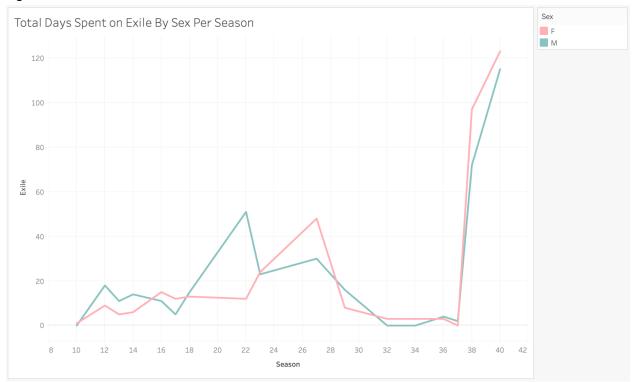
Figure 1

Contestant Count per Total Number of Days on Exile by Sex



From the bar chart, we can see that generally, the majority of players spend no days on Exile Island, and there does not seem to be a large disparity between sex and total days spent away from the game.

Figure 2



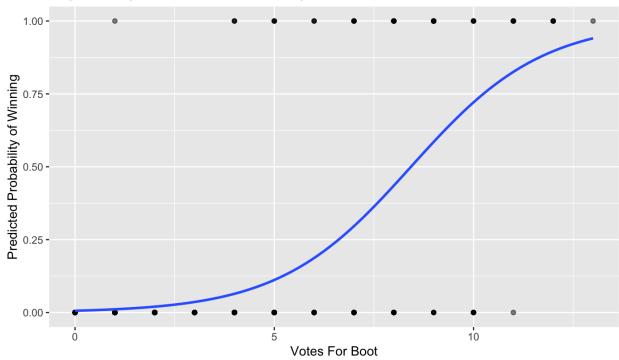
From this line chart, we can see that the total number of days spent on exile varies less by sex and more by season. For the majority of seasons, the total number of days spent on exile is roughly even across sex. There are a few exceptions, as seen in seasons 22 and 27, but on average, sex is not a significant predictor of the total number of days a player will spend on Exile Island.

This plot also helps us see the extent to which Exile Island played a role in each season. For instance, we see a massive trend upwards in total days spent on exile during seasons 38 and 40. During season 38, "Survivor: Edge of Extinction," once players were voted out, they could opt to go to the Edge of Extinction and wait for an opportunity to get back into the game rather than being sent home permanently. Thus, we can clearly see the devotion of players towards winning the game, and their willingness to stay in the game in any form, given the opportunity.

Similarly, in season 40, "Survivor: Winners at War," the Edge of Extinction and the concept of redemption were emphasized. Unlike other seasons, players voted out had to go to the Edge of Extinction, and could not choose to decline, which explains the high count of total days players spent in exile.

Figure 3

Logistic Regression Curve Predicting Win Status from VFB



Votes for Boot (VFB): Number of times in which the player cast a vote for the person voted out.

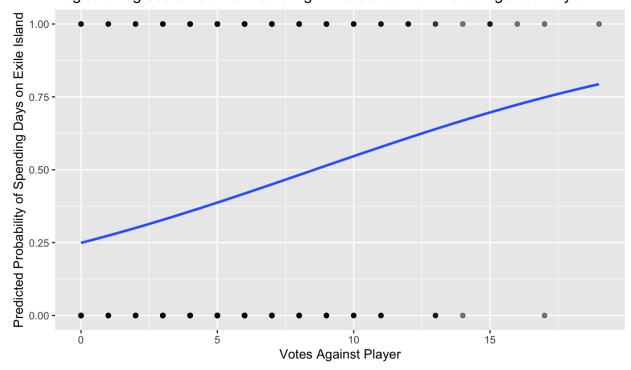
The top 3 players in Survivor go to "Final Tribal Council," in which the jury of voted out players cast a vote for the player they deem worthy of winning. Win status was encoded as:

- 1 = win (made it to top 3)
- 0 = lose (voted out before top 3)

From this simple logistic regression model, we can see that as the number of VFB increases (the more a player's votes at tribal council align with the group consensus which determines who will be voted out), the higher probability a player has of making it to the top 3.

Figure 4

Logistic Regression Curve Predicting Exile Status from Votes Against Player



Votes Against Player (VAP): The number of votes cast against the player.

Exile status was encoded as:

- 1 = total days spent on Exile Island >= 1
- 0 = no days spent on Exile Island

Though the trend of this simple logistic regression model does not strongly follow the 'S' shape as we would expect, VAP was a statistically significant predictor of exile status. From the plot, we can see that as the VAP increases, so does the probability of the player spending at least one day on Exile Island.

Since Survivor is a deeply social game, the concept of Exile Island and being isolated from the rest of the group is perceived as detrimental to a player's game. Typically, this allows for other players to develop relationships and strategies without the exiled player, and this model validates those fears associated with Exile Island, since non-isolated players seem to plot together and vote out players that have spent time away from the game.