Figure 13: Proportional Odds Assessment Results

Question 2: Do available characteristics of an object strongly influence how they are classified?

Proportional Odds Assessment - Is the object a vehicle or not a vehicle?

- · Animal, pedestrian Not vehicles
- · Bicycle, bus, car, emergency_vehicle, motorcycle, truck, other_vehicle Vehicles

| Analysis of Maximum Likelihood Estimates | | | | | |
|--|----|----------|-------------------|--------------------|------------|
| Parameter | DF | Estimate | Standard Error | Wald Chi-Square | Pr > ChiSq |
| Intercept | 1 | -17.6761 | 0.4095 | 1863.6697 | <.0001 |
| sizeHeight | 1 | 32.2669 | 0.6036 | 2857.7430 | <.0001 |
| sizeWidth | 1 | 20.9036 | 0.4044 | 2671.3780 | <.0001 |
| sizeHeight*sizeWidth | 1 | -23.9559 | 0.4009 | 3570.2992 | <.0001 |
| sizeDepth | 1 | 0.7653 | 0.3620 | 4.4683 | 0.0345 |
| sizeHeight*sizeDepth | 1 | -19.4763 | 0.5124 | 1444.8869 | <.0001 |
| sizeWidth*sizeDepth | 1 | -4.0956 | 0.3237 | 160.0897 | <.0001 |
| sizeHe*sizeWi*sizeDe | 1 | 13.4949 | 0.3559 | 1437.4172 | <.0001 |

 e^{3^2} = 7.89 ~ 789% increase in likelihood that an object is a vehicle vs not a vehicle for each meter increase in height.

- Greatest effect observed from an object's height.
- Antagonistic effects when combined.
- Indicates that depth might be a derived value. (If what we perceive as depth were consistent across perspectives, we would expect a higher value)