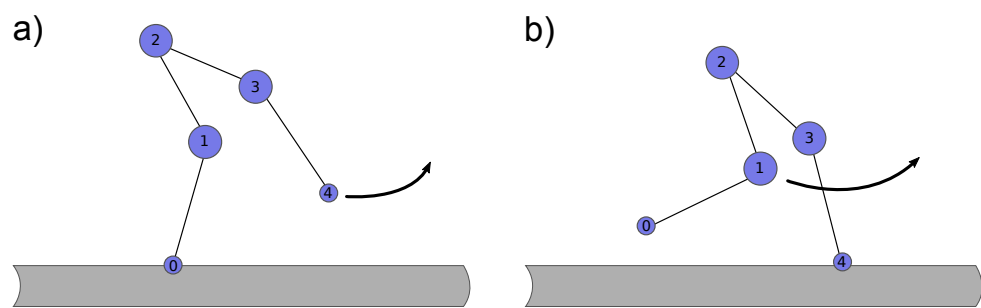


**Figure 1: Two dimensional histogram** comparing the total signed step length to the signed initial displacement between the binding domains. A positive value indicates that the front foot made the step (leading). A negative value indicates the rear foot (lagging) made the step. Simulations show a strong, negative correlation. A similar fit from an experimental paper is plotted for comparison.



**Figure 2:** Diagram illustrating a leading foot step (a) and a lagging foot step (b).