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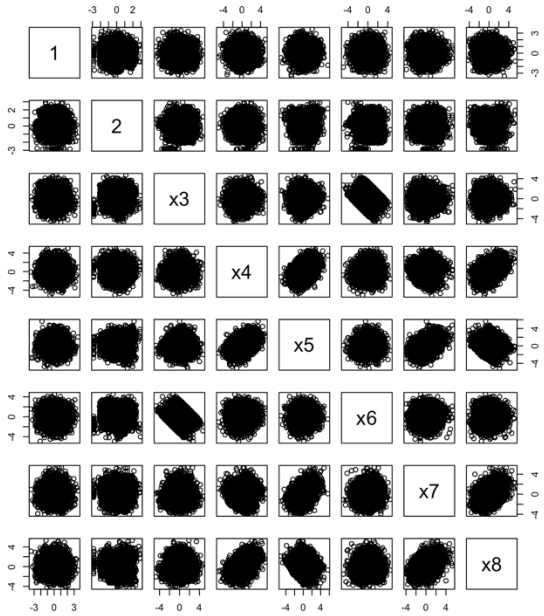
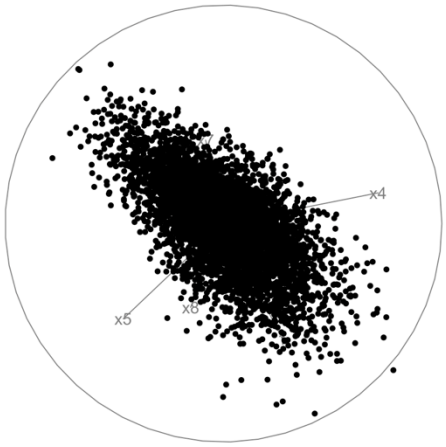
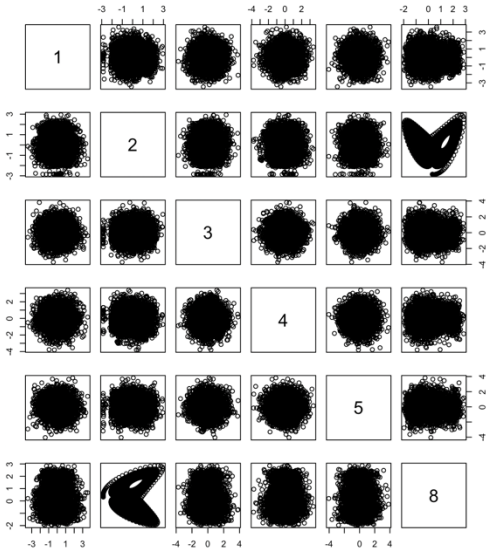
Assignment 5 plots

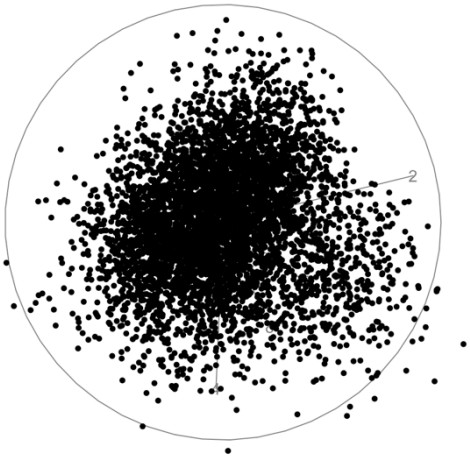
**Mystery2** While using the animate function, we can see something that looks like a negative linear relationship. From pairs() Col 2 routinely plots outliers with other groups.



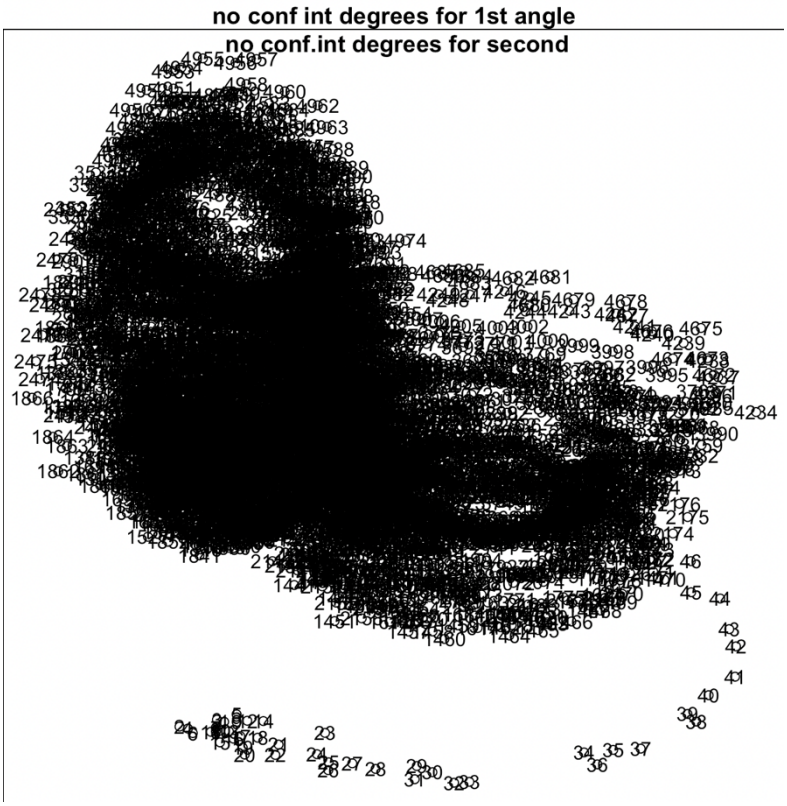




**Mystery9** like it has two groupings of data. There were multiple instances where the bottom right was spread out further from the middle while looking at the data through the animate() function. From pairs(), you can see Col 2 routinely plots outliers, and when plotted with Col 8, you see and interesting mapping of points that resembles a butterfly.



While looking at **Mystery2** through gui.asym(), if you reverse input the trim values 0.9 and 0.4, you see the butterfly shape extenuated from the data.




Upon researching the "Butterfly Effect", it's based upon the premise of a butterfly in South America effecting a tornado somewhere else. I watched a video that got into talks of chaos, and it outlined that a small deviation in original inputs can drastically change the output of a model-which is important to remember given the nature of predictive modeling uses decimal numbers that approximate reality's dimensions. I could go on about this, but I believe the prompt is simpler regarding the curse of dimensionality. The curse of dimensionality is that the more data you collect, and the more you cross reference it, the more muddled the results are. Without starting values, it is like poking in the dark while trying to find something interesting in the data. If animate were the only tool I could use to find something interesting in the data, I would have to wait an obnoxious amount of time while comparing even higher dimension data. You will run into this problem using pairs too.