The ones we are making these past few weeks are called **structural** recursion. And the way they work is they start with a piece of data, and at each recursive call they take some sub piece of that data as the argument to the next.

**Generative** recursion is a new kind of recursion in which the **data** passed to the recursive call is generated, rather than being a part of the data passed to the current call.

|  |  |
| --- | --- |
| Structural recursion | Generative recursion |
| * Operate on the remaining parts of the existing data | * Operate on new data |
|  | * We lost our old proof that recursive function will end up stopping |