The role of stress-induced mutation in the emergence of complex adaptations

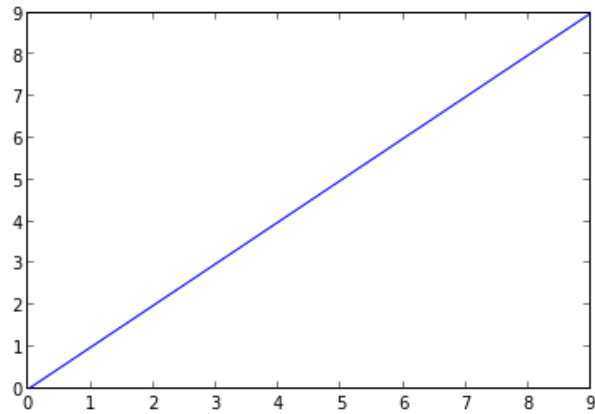Yoav Ram & Lilach Hadany

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Adaptation on complex fitness landscapes

Some mutations are deleterious alone but beneficial together.

This is the source of an interesting problem in evolution: **how can populations shift peaks from a local fitness maximum to a global fitness maximum?**

```
In [1]: import matplotlib.pyplot as plt
        plt.plot(range(10));
```

The genotypes: ab, Ab, aB, AB.

The fitness: 1, 1-s, 1-s, and 1+Hs.

$$\alpha = \frac{1+Hs}{\omega}$$