

## **Why Use Scales?**

### **Pitch perception**

*Short-term memory*

Magic number 7 (+/- 2)

*Discrimination task vs. Identification task*

*Perceptual categories vs. Conceptual categories*

### **Intervals**

*Pitch 'distance' or 'height' between two notes*

*Ratiometric perception*

Defined as ratio between notes rather than direct frequency difference

*Pitch height vs. Chroma*

*Steps*

*Leaps*

*Octaves*

Most scales are octave replicating (or nearly so)

### **Tuning Systems**

*An abstract generative system of intervals*

*Defines basic interval categories*

## Scales

*Systems of long-term memory categories that govern the relations between multiple intervals*

*A subset of the elements of a tuning system*

*Generative systems*

Recurring interval(s)

Pythagorean spiral of 5ths

Equal divisions of a given interval

12-tet,  $\frac{1}{4}$  tones, etc.

Small-number ratios

Just intonation

Temperaments

Meantone, Well-temperament, etc.

Spectral/Overtone/Harmonic

Non-rational

Gamelan, African, etc.