

Dr. Davies
Organic I Chemistry
Resonance!!!!

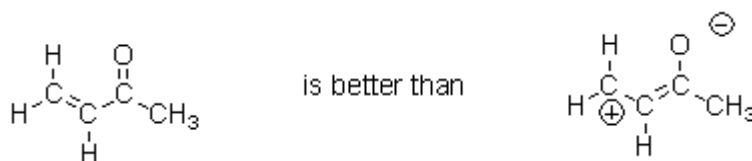
Resonance is a stabilization in a molecule due to the delocalization of electrons. Resonance structures exist when a structure can be depicted in more than one way through the delocalization of electrons. The actual structure is a hybrid of all of the contributing structures, just as a mule is a hybrid of a horse and a donkey.

Rules of Resonance

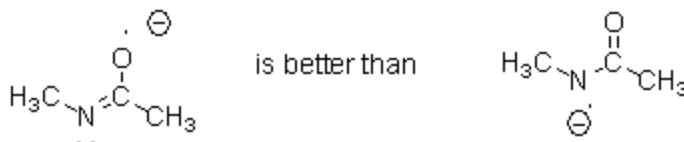
1. Atoms **never** move, only electrons!!
2. Orbital hybridization is retained from one resonance structure to another. (We will get to hybridization in a few days).
3. The most stable resonance structure contributes most strongly to the overall hybrid.

Prioritizing Resonance structures (listed in order of importance)

1. All atoms have an octet!!
2. Minimize the number of charges.



3. If a negative charge is present, place it on the most electronegative atom.



4. Minimize charge separation.

