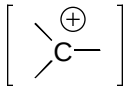
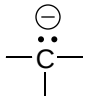
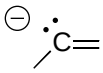
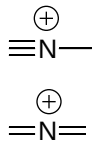
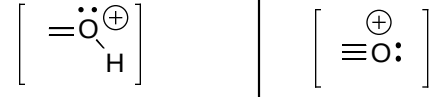
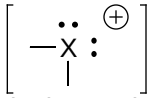
Common Bonding Patterns

L. Cabana, Spring 1998

Element	Hybridization: sp^3	Hybridization: sp^2	Hybridization: sp	Bonds	Unshared e^- Pairs	Valence e^-
Carbon, C positive		 carbocation		3	0	6
neutral				4	0	8
negative	 alkyl carbanion	 vinyl anion	acetylide anion	3	1	8
Nitrogen, N positive	ammonium cation			4	0	8
neutral				3	1	8
negative	amide anion			2	2	8
Oxygen, O positive		protonated carbonyl	 oxonium cation	3	1	8
neutral				2	2	8
negative	oxide anion			1	3	8
Halogen, X (F, Cl, Br, I) positive	 halonium cation			2	2	8
neutral				1	3	8
negative	halide anion			0	4	8