a carbon atom is attached to four hydrogen atoms, or to one carbon and three hydrogens, or to two carbons and two hydrogens, or to three carbons and one hydrogen, or to four carbon atoms; in all such cases the effect of the radical upon the general characteristics of the molecule varies very little.

There are a great number of phenomena which might be employed further to illustrate the nature of the case, but two will suffice. The acidity of acetic acid, $CH_3 \cdot COOH$, is only slightly and slowly changed by the accumulation of hydrocarbon radicals; thus the compounds propionic acid, $CH_3 \cdot CH_2 \cdot COOH$, and butyric acid, $CH_3 \cdot CH_2 \cdot CH_2 \cdot COOH$, are only a little less acid than acetic acid itself, because nearly all the effect of such larger radicals as they contain is already exerted by the methyl group.

IONIZATION CONSTANTS OF ACIDS

Acetic acid,	$CH_3 \cdot COOH$	0.000018
Propionic acid,	$CH_3 \cdot CH_2 \cdot COOH$	0.000014
Butyric acid,	$CH_3 \cdot CH_2 \cdot CH_2 \cdot COOH$	0.000016
Glycolic acid,	$CH_2OH \cdot COOH$	0.00015
Chloracetic acid,	$CH_2Cl \cdot COOH$	0.0015
Dichloracetic acid,	$CHCl_2 \cdot COOH$	0.05
Trichloracetic acid,	$CCl_3 \cdot COOH$	1.2
Glycocoll,	$CH_2NH_2 \cdot COOH$	0.00000000018
Oxalic acid,	$COOH \cdot COOH$	0.1