Abstract (11oct96): We define the concept of total curvature $T(\gamma)$ for a general curve γ in $\mathbf{R}^d$. In the case when γ is a smooth curve, one has

$$T(\gamma) = \int |\kappa| \, ds,$$

where κ is the curvature of γ. This result will be used to establish the results by Fenchel and Milnor.