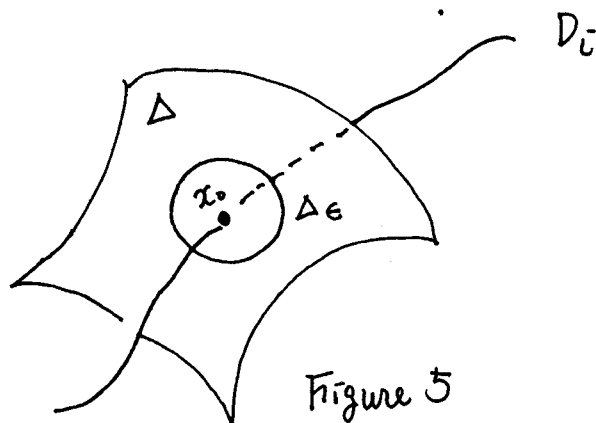


a manifold, $M-D$ is path-connected.
 \Rightarrow We may choose the γ_{D_i} to lie in $M-D$. \Rightarrow

Indeed, by assumption $\gamma = \partial\Delta$, where Δ is a 2-chain in M . Since the singularities of D are in real codimension 4, we may assume that Δ meets D transversely at simple points.

\Uparrow By the proposition on p. 21, D_i has the codimension ≤ 2 .
 \Rightarrow The singularities of D are in real codimension ≤ 4 .
 \Rightarrow We may choose Δ so that Δ intersects D transversely at simple points by transversality. \Rightarrow
 $[\gamma] = 0$ in $H_1(M, \mathbb{Z})$

If $x_0 \in D_i$ is such an intersection point, then near x_0 we may picture the part Δ_ϵ of Δ lying within distance ϵ of D_i as a normal disc at x_0 (Figure 5), and so $\partial\Delta_\epsilon = \gamma_{D_i}$.



Consequently $\gamma - \gamma_{D_i}$ has one less intersection point with D , and repeating the argument gives a homology
 $\gamma \sim \sum m_i \gamma_{D_i}$.