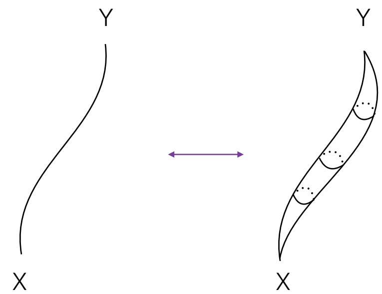

$$\sum_{paths} e^{i\frac{mc}{h}A_{xy}} \longleftrightarrow \sum_{surfaces} e^{i\frac{mc}{h}A_{xy}}$$

$$[A_{xy}] = cm$$

The Gonihedric Paradigm

Extensions of the Feynman Path Integral and of the Ising Model

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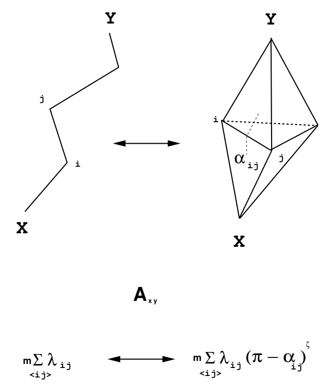

The action A for random surfaces and for the random paths coincides when the surfaces degenerate to a single random path. The action involves the products of edge length $\lambda_{ij} = |x_i - x_j|$ times the corresponding deficit angle $|\pi - \alpha_{ij}|$ and the sum is over all edges

$$A = m \sum_{<ij>} \lambda_{ij} |\pi - \alpha_{ij}|^{\zeta}.$$

The "gonihedric" paradigm is from two hellenic words $\gamma\omega\nu\iota'\alpha$ - the angle - and $\epsilon'\delta\rho\alpha$ - the side.

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