CS to FT, Missing Links

The Milnor-Moore Theorem.

"Asymptotics" Done Right.

Faddeev-Popov Done Right.

The Berezin Integral. Srednicki's sec. 44, pp. 276; Weinberg's vol I sec. 9.5 pp. 399(423); Wikipedia: Berezin integral; Wikipedia: Grassmann integral.

The "Extra" Supersymmetry. — From Delduc-Gieres-Sorella: With $\mathcal{D}_\mu c = \partial_\mu c + [A_\mu, c]$,

$$CS(A) = -\frac{1}{2}\int \mathrm{tr}[\epsilon^{\mu\nu\rho} A_\mu \partial_\nu A_\rho + \frac{1}{3} A_\mu [A_\nu, A_\rho])]$$

$$S(A,d,b,c) = CS(A) + \int \mathrm{tr}[d\partial_\mu A^\mu + b\partial^\mu \mathcal{D}_\mu c]$$

$$sA_\mu = -\mathcal{D}_\mu c, \quad sc = cc, \quad sb = d, \quad sd = 0$$

$$\delta_\rho A_\mu = \epsilon_{\mu\rho\nu}\partial^\nu c, \quad \delta_\rho c = 0, \quad \delta_\rho b = A_\rho, \quad \delta_\rho d = \mathcal{D}_\rho c$$

— From Axelrod-Singer 1:

$$CS(A) = \frac{1}{4\pi}\int_M Tr\left(A \wedge dA + \frac{2}{3}A^3\right)$$

The Shift in k.

Fulton-MacPherson in detail.

— Mostly done in `Compactification.pdf`, though more can be done regarding diagram-dependent compactifications, regarding curve (γ)-dependent compactifications, and regarding infra-red.