Title: String Theory Review-5

Date: Jan 30, 2015 10:15 AM

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Abstract:

$$\int F(x,\theta)\, dx\, d\theta$$

$$Q\theta = \cdots \qquad Q(FG) = QF\,G \pm F\,QG$$

$$Q^2 = 0$$

$$\int QG \, dx\, d\theta = 0$$

$$\int F_1 F_2 F_3 \cdots dx\, d\theta = \langle F_1 F_2 F_3 \cdots$$

$$QF_1 = 0$$

$$\partial_t \left[\int e^{tQG} F_1 F_2 F_3 \cdots dx\, d\theta \right] = 0$$

$$\int QG \, F_2 F_3 F_4 \, dx\, d\theta = 0$$

$$= \int F_1 F_2 F_3 \cdots dx\, d\theta$$

$$\int F(x,\vartheta)\, dx\, d\vartheta$$

$$\int QG \, dx\, d\vartheta = 0$$

$$\partial_t \left[\int e^{tQG} F_1 F_2 F_3 \cdots \, dx\, d\vartheta \right] = 0$$

$$= \int F_1 F_2 F_3 \cdots \, dx\, d\vartheta$$

$$Qx = \cdots$$

$$Q\vartheta = \cdots \qquad Q(FG) = QF\,G \pm F\,QG$$

$$Q^2 = 0$$

$$\int F_1 F_2 F_3 \cdots \, dx\, d\vartheta = \langle F_1 F_2 F_3 \cdots$$

$$QF_1 = 0$$

$$\int QG\, F_2 F_3 F_4 \, dx\, d\vartheta = 0$$

$= \int F_1 F_2 F_3 \ldots d\vartheta\, dx$

$Qx^a = \vartheta^a \qquad Q \cdot F(x) = \vartheta^a \partial_a F$

$Q\vartheta^a = 0 \qquad Q\left[F_{abc\ldots}(x)\,\vartheta^a \vartheta^b \vartheta^c \ldots\right] \qquad \vartheta^d \partial_d F_{abc\ldots}\, \vartheta^d \vartheta^a \vartheta^b \vartheta^c \ldots$

$\int \prod_a dx^a d\vartheta^a \; F_{12\ldots d}\, \underline{\vartheta^1 \ldots \vartheta^d}$

$G \,,\, c_a$

$$\mathcal{L}[v^a, v^b] = f^{ab}_c\, v^c \qquad [\mathcal{L}^a, \mathcal{L}^b] = f^{ab}_c\, \mathcal{L}^c$$

$$Q F(g) = c_a \mathcal{L}_{v^a} F(g) \equiv c_a v^{a,i} \frac{\partial}{\partial g^i} F$$

$$Q^2 F(g) = Q c_a\, \mathcal{L}_{v^a} F(g) + c_a c_b\, \mathcal{L}^a \mathcal{L}^b F = 0$$

$$Q c_a = f_a^{bc}\, c_b c_c \qquad Q^2 c_a = f_a^{bc}\, f_b^{ef}\, c_c c_e c_f$$

$$Q F(g) = c_a \mathcal{L}_{v^a} F(g) \equiv c_a v^{a,i} \frac{\partial}{\partial g^i} F$$

$$Q^2 F(g) = Q c_a \mathcal{L}_{v^a} F(g) + c_a c_b \mathcal{L}^a \mathcal{L}^b F = 0$$

$$Q c_a = \frac{1}{2} f_a^{\ bc} c_b c_c \qquad Q^2 c_a = f_a^{\ b[c} f_b^{\ ef]} c_c c_e c_f$$

$$\int d\mu_g \prod dc^a$$

$x \quad , c , \; b \; , B$

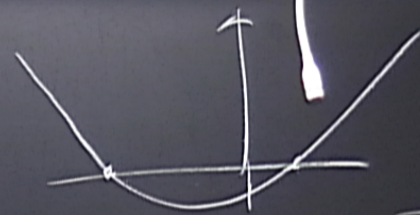
$\qquad F \quad F$

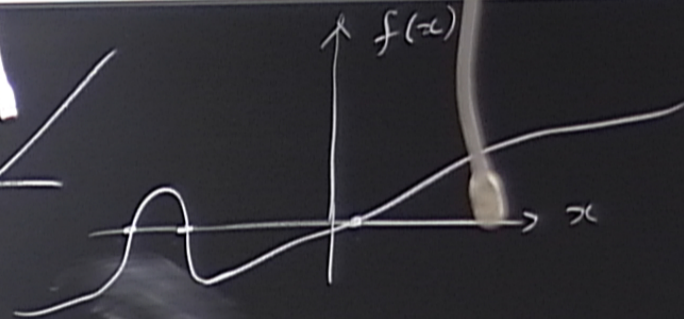
$Qx = c$

$Qc = 0$

$Qb = B$

$QB = 0$



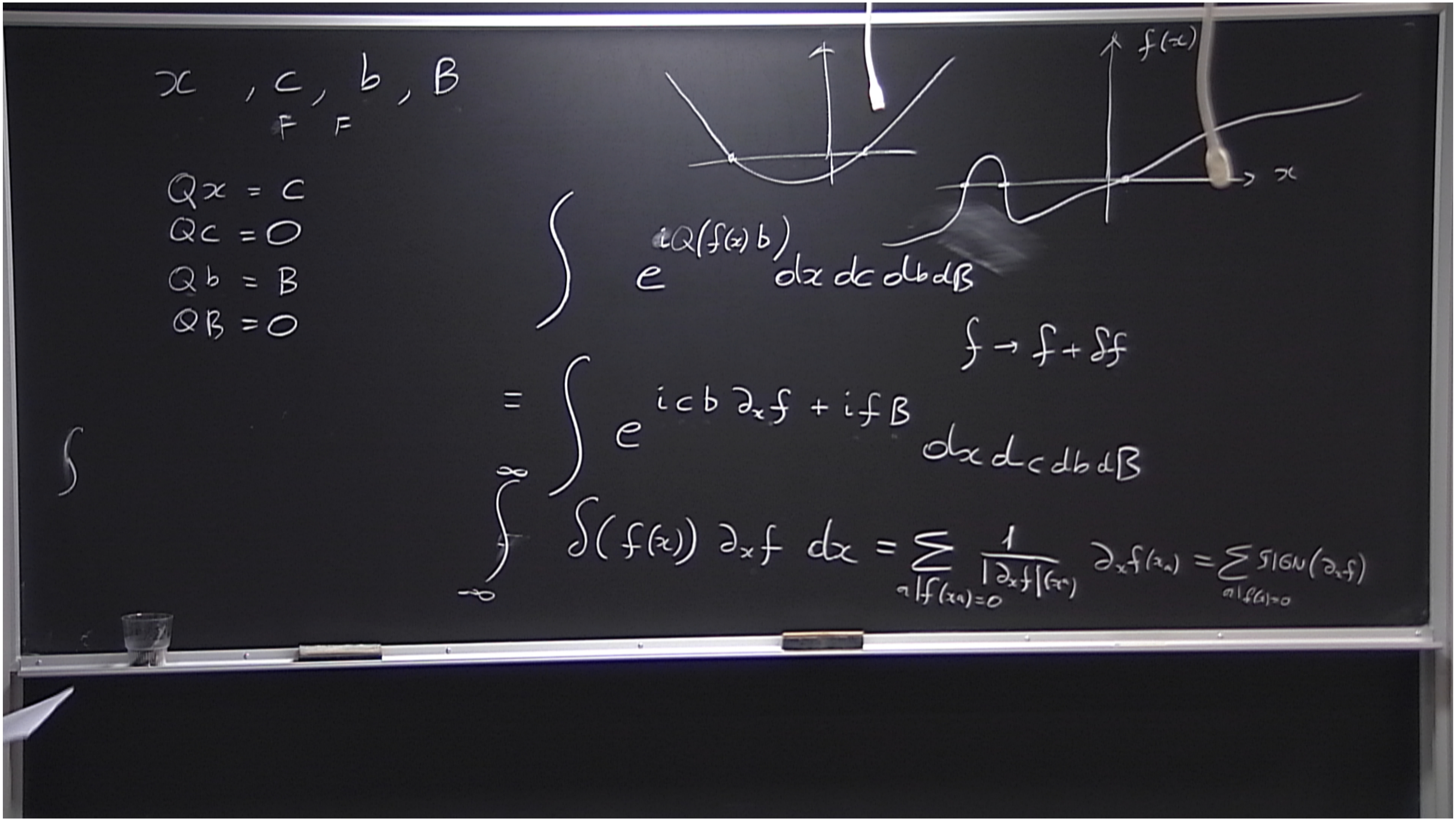


$$\int e^{iQ(f(x)\, b)}\, dx\, dc\, db\, dB$$

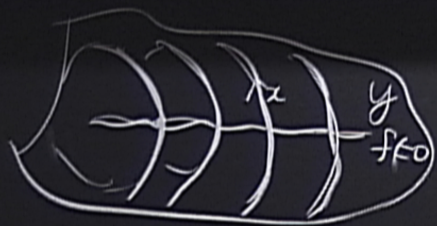
$$= \int e^{icb\,\partial_x f + i f B}\, dx\, dc\, db\, dB$$

$\int$

$$\int_{-\infty}^{\infty} \delta(f(x))\, \partial_x f \, dx = \sum_{a \mid f(x_a)=0} \frac{1}{|\partial_x f|(x_a)}\, \partial_x f(x_a) = \sum_{a \mid f(a)=0} \mathrm{SIGN}(\partial_x f)$$


x , c, b, B
F F
Qx = c
Qc = 0
Qb = B
QB = 0
∫ e^{iQ(f(x) b)} dx dc db dB
f → f + δf
= ∫ e^{icb ∂ₓf + ifB} dx dc db dB
∫_{-∞}^{∞} δ(f(x)) ∂ₓf dx = Σ_{a | f(x_a)=0} 1/|∂ₓf|(x_a) ∂ₓf(x_a) = Σ_{a | f(x_a)=0} SIGN(∂ₓf)
f(x)
x

$$\int_{-\infty} \delta(f(x))\,\partial_x f\,dx = \sum_{a\,|\,f(x_a)=0} \frac{1}{|\partial_x f|(x_a)}\,\partial_x f(x_a) = \sum_{a\,|\,f(x_a)=0} \mathrm{SIGN}(\partial_x f)$$



$y^a \in \mathcal{M}$ $\qquad v \qquad$ $\int F(y)\, e^{icb\,\mathcal{L}_v f + iBf}$

$$Q y^a = c v^a$$
$$Qc = 0$$
$$Qb = B$$
$$QB = 0$$

$$= \int \delta(f(y))\, \mathcal{L}_v f \; F(y)\, dy$$

$$Q\,F(y) = c_a \mathcal{L}^a F(y)$$

$$Q\,c_a = f_a{}^{bc}\, c_b c_c$$

$$Q\,b^i = B^i$$

$$Q\,B^i = 0$$

$$\int F(y)\, e^{i f_i(y) B^i + i c_a b^i \mathcal{L}^a f_i}\, db\, dc\, dB\, dy$$

$$\int dm\, \delta\left(h_{ab} - h^{0}_{ab}(m)\right)$$

$$Q\, F(y) = c_a \mathcal{L}^a F(y)$$

$$Q\, c_a = f_a^{\ bc}\, c_b c_c$$

$$Q\, b^i = B^i$$

$$Q\, B^i = 0$$

$$Q\, m = \sigma$$

$$\int F(y)\, e^{i f_i(y) B^i + i c_a b^i \mathcal{L}^a f_i}\, db\, dc\, dB\, dy$$

$$\int_{\mathcal{M}_{\text{COMPLEX STRUCTURES}}}$$

$$f^i(y, m) = 0$$

$$\int dm\, \delta\left(h_{ab} - h^0_{ab}(m)\right)$$

$$Q\, F(y) = c_a \mathcal{L}^a F(y)$$

$$Q\, c_a = f_a^{\ bc} c_b c_c$$

$$Q\, b^i = B^i$$

$$Q\, B^i = 0$$

$$Q\, m = \sigma$$

$$\int F(y)\, e^{i f_i(y) B^i + i c_a b^i \mathcal{L}^a f_i}\, db\, dc\, dB\, dy$$

$$\int e^{\cdots \left(\frac{\partial f}{\partial m} b\right)}\, dm\, d\sigma\, db\, dc\, dB\, dy$$

$$f^i(y, m) = 0 \qquad \int dm\, \delta\left(h_{ab} - h^0_{ab}(m)\right)$$

$$Q\, F(y) = c_a \mathcal{L}^a_v F(y)$$

$$Q\, c_a = f_a^{\ bc} c_b c_c$$

$$Q\, b^i = B^i$$

$$Q\, B^i = 0$$

$$Q\, m = \sigma$$

$$\int F(y)\, e^{i f_i(y) B^i + i c_a b^i \mathcal{L}^a f_i} \, db\, dc\, dB\, dy$$

$$\int e^{\cdots \left(\frac{\partial f}{\partial m} b\right)} dm\, \cancel{d\sigma}\, db\, dc\, dB\, dy$$