Addendum

Statistics of Self-Avoiding Walks on Random Lattices

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Just after the acceptance, Dr. D. Dhar (TIFR, Bombay) has pointed out that Eq. (2.6) can be solved exactly for finite p ($= 1 - c$). If we define a quantity Y_N as

$$Y_N = \overline{\ln G_N} - c^2 \ln 2 / (1 - c)^2$$

then

$$Y_N = (2c - c^2) Y_{N-1}$$

and consequently

$$Y_N = (2c - c^2)^N Y_0, \quad Y_N \rightarrow 0 \text{ as } N \rightarrow \infty$$

i.e.,

$$\overline{\ln G_N} = c^2 \ln 2 / (1 - c)^2 \quad \text{for large } N.$$

This indicates that there is a sharp crossover to another critical behaviour when p is finite (for $c \rightarrow 1$ the critical behaviour remains same as that of the pure case and this limit can not be studied using this transformation because Y_N is not defined as $c \rightarrow 1$).

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