

Under rescaling  $r \rightarrow \zeta^{(d-\theta)/d} r$ , and the temperature  $T \sim t^{-1}$ , and so

$$S \sim T^{(d-\theta)/z} = T^{d_{\text{eff}}/z}$$

where  $\theta = d - d_{\text{eff}}$ , the “dimension deficit”, is now identified as the violation of hyperscaling exponent.