Maximum Entropy Theorem

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Theorem 1 (Epstein) *Let $(X \times Y, \mu \times \nu)$ be a product computable measure space. Let $A : \mathbb{N} \to X$, $B : \mathbb{N} \to Y$ be injective functions with $\mathbf{I}(\langle A, B\rangle : \chi) < \infty$. For $s \in \mathbb{N}$, $m < s$, there exists 2^{s-m} indices $t < 2^s$ with $\max\{\mathbf{G}_\mu(A(t)), \mathbf{G}_\nu(B(t))\} < -m + O(\log s)$.*