Unofficial Errata for The Mathematics of Coding: Information, Compression, Error Correction, and Finite Fields

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(Errata collected by Vic Reiner)

Chapter 2

(p. 39) The first display-style equation on the page should read

$$H(p_1, \ldots, p_m, q_1, \ldots, q_n) = H(p, q) + pH(p_1/p, \ldots, p_m/p) + qH(q_1/q, \ldots, q_n/q)$$

since the definition of conditional probability is $P(A|B) = P(A \cap B)/P(B)$. For example, if A represents an event that occurs with p_i and B represents the knowledge that the event that occurs has probability given by the p's and not the q's, then $P(B) = \sum p_i$.

Chapter 3

(p. 47) First paragraph: The condition does require that $f : W \to \Sigma^*$ is injective, but it is not an if and only if statement. The exact requirement is that the map $f^* : W^* \to \Sigma^*$ which encodes messages is injective.