Random

Compton's encyclopedia

3 Statistics of statistical sample selection in which all possible samples have equal probability of selection ran dom ly adv. ran dom ness n. SYN. random applies to that which occurs or is done without careful choice, aim, plan, etc. [1]

Video Poker column

What Does Random Mean? In video poker machines, a random number generator (RNG) is employed to make sure the player (and the casino) get a fair shuffle each time. ... People frequently ask me something like, "If the machines are truly random, how do you explain the fact that I went four hours without hitting a four of a kind? That certainly doesn't sound very random to me." The person asking the question is confusing "average" or "typical" with "random", and they are not the same thing at all. What random means, speaking in general terms, is that the deck is thoroughly shuffled in a fair manner immediately before each deal. That is ALL that "random" means. It definitely does not mean that the deals in each hour are average.[2]

"Random" means unpredictable in the short run. Surprisingly, however, "random" also means being very predictable in the long run. If you deal millions of hands, you will end up with very close to the correct number of each type of hand. If you deal 200 hands, anything can happen.

Mathworld Definition

A random number is a number chosen as if by chance from some specified distribution such that selection of a large set of these numbers reproduces the underlying distribution.[3]

Kolmogorov Complexity

A sequence is random if any procedure for generating requires as much information as the sequence itself. There is no short program to generate the sequence.[4]

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[1] Excerpted from Compton's Reference Collection 1996 Copyright (c) 1995 Compton's New-Media, Inc.

[2] Bob Dancer's video poker column

[3] http://mathworld.wolfram.com/RandomNumber.html

[4] My gloss on Kolmogorov complexity.