Fooled By Randomness

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RANDOMNESS, NONSENSE, AND THE SCIENTIFIC INTELLECTUAL

On extending the Monte Carlo generator to produce artificial thinking and compare it with rigorous nonrandom constructs. The science wars enter the business world. Why the aesthete in me loves to be fooled by randomness.

RANDOMNESS AND THE VERB

Our Monte Carlo engine can take us into more literary territory. Increasingly, a distinction is being made between the scientific intellectual and the literary intellectual—culminating with what is called the "science wars," plotting factions of literate nonscientists against no less literate scientists. The distinction between the two approaches originated in Vienna in the 1930s, with a collection of physicists who decided that the large gains in science were becoming significant enough to make claims on the field known to belong to the humanities. In their view, literary thinking could conceal plenty of well-sounding non-sense. They wanted to strip thinking from rhetoric (except in literature and poetry where it properly belonged).

The way they introduced rigor into intellectual life is by declaring that a statement could fall only into two categories: deductive, like "2 +2 =4," i.e., incontrovertibly flowing from a precisely defined axiomatic framework (here the rules of arithmetic), or inductive, i.e., verifiable in some manner (experience, statistics, etc.), like "it rains in Spain" or "New Yorkers are generally rude." Anything else was plain unadulterated hogwash (music could be a far better replacement to metaphysics). Needless to say that inductive statements may turn out to be difficult, even impossible, to verify, as we will see with the black swan problem—and empiricism can be worse than any other form of hogwash when it gives someone confidence (it will take me a few chapters to drill the point). However, it was a good start to make intellectuals responsible for providing some form of evidence for their statements. This Vienna Circle was at the origin of the development of the ideas of Popper, Wittgenstein (in his later phase), Carnap, and flocks of others. Whatever merit their original ideas may have, the impact on both philosophy and the practice of science has been significant. Some of their impact on nonphilosophical intellectual life is starting to develop, albeit considerably more slowly.

One conceivable way to discriminate between a scientific intellectual and a literary intellectual is by considering that a scientific intellectual can usually recognize the writing of another but that the literary intellectual would not be able to tell the difference between lines jotted down by a scientist and those by a glib nonscientist. This is even more apparent when the literary intellectual starts using scientific buzzwords, like "uncertainty principle," "Gödel's theorem," "parallel universe," or "relativity," either out of context or, as often, in exact opposition to the scientific meaning. I suggest reading the hilarious Fashionable Nonsense by Alan Sokal for an illustration of such practice (I was laughing so loudly and so frequently while reading it on a plane that other passengers kept whispering things about me). By dumping the kitchen sink of scientific references in a paper, one can make another literary intellectual believe that one's material has the stamp of science. Clearly, to a scientist, science lies in the rigor of the inference, not in random references to such grandiose concepts as general relativity or quantum indeterminacy. Such rigor can be spelled out in plain English. Science is method and rigor; it can be identified in the simplest of prose writing. For instance, what struck me while reading Richard Dawkins' Selfish Gene is that, although the text does not exhibit a single equation, it seems as if it were translated from the language of mathematics. Yet it is artistic prose.

Reverse Turing Test

Randomness can be of considerable help with the matter. For there is another, far more entertaining way to make the distinction between the babbler and the thinker. You can sometimes replicate something that can be mistaken for a literary discourse with a Monte Carlo generator but it is not possible randomly to construct a scientific one. Rhetoric can be constructed randomly, but not genuine scientific knowledge. This is the application of Turing's test of artificial intelligence, except in reverse. What is the Turing test? The brilliant British mathematician, eccentric, and computer pioneer Alan Turing came up with the following test: A computer can be said to be intelligent if it can (on average) fool a human into mistaking it for another human. The converse should be true. A human can be said to be unintelligent if we can replicate his speech by a computer, which we know is unintelligent, and fool a human into believing that it was written by a human. Can one produce a piece of work that can be largely mistaken for Derrida entirely randomly?

The answer seems to be yes. Aside from the hoax by Alan Sokal (the same of the hilarious book a few lines ago), who managed to produce nonsense and get it published by some prominent journal, there are Monte Carlo generators designed to structure such texts and write entire papers. Fed with "postmodernist" texts, they can randomize phrases under a method called recursive grammar, and produce grammatically sound but entirely meaningless sentences that sound like Jacques Derrida, Camille Paglia, and such a crowd. Owing to the fuzziness of his thought, the literary intellectual can be fooled by randomness.

At the Monash University program in Australia featuring the Dada Engine built by Andrew C. Bulhak, I toyed with the engine and generated a few papers containing the following sentences:

However, the main theme of the works of Rushdie is not theory, as the dialectic paradigm of reality suggests, but pretheory. The premise of the neosemanticist paradigm of discourse implies that sexual identity, ironically, has significance.

Many narratives concerning the role of the writer as observer may be revealed. It could be said that if cultural narrative holds, we have to choose between the dialectic paradigm of narrative and neoconceptual Marxism. Sartre's analysis of cultural narrative holds that society, paradoxically, has objective value.

Thus, the premise of the neodialectic paradigm of expression implies that consciousness may be used to reinforce hierarchy, but only if reality is distinct from consciousness; if that is not the case, we can assume that language has intrinsic meaning.

Some business speeches belong to this category in their own right, except that they are less elegant and draw on a different type of vocabulary than the literary ones. We can randomly construct a speech imitating that of your chief executive officer to ensure whether what he is saying has value, or if it is merely dressed-up nonsense from someone who was lucky to be put there. How? You select randomly five phrases below, then connect them by adding the minimum required to construct a grammatically sound speech.

We look after our customer's interests / the road ahead / our assets are our people / creation of shareholder value / our vision / our expertise lies in / we provide interactive solutions / we position ourselves in this market / how to serve our customers better / short-term pain for long-term gain / we will be rewarded in the long run / we play from our strength and improve our weaknesses / courage and determination will prevail / we are committed to innovation and technology / a happy employee is a productive employee / commitment to excellence / strategic plan / our work ethics.

If this bears too close a resemblance to the speech you just heard from the boss of your company, then I suggest looking for a new job.

The Father of All Pseudothinkers

It is hard to resist discussion of artificial history without a comment on the father of all pseudothinkers, Hegel. Hegel writes a jargon that is meaningless outside of a chic Left Bank Parisian café or the humanities department of some university extremely well insulated from the real world. I suggest this passage from the German “philosopher” (this passage was detected, translated, and reviled by Karl Popper):

Sound is the change in the specific condition of segregation of the material parts, and in the negation of this condition; merely an abstract or an ideal ideality, as it were, of that specification. But this change, accordingly, is itself immediately the negation of the material specific subsistence; which is, therefore, real ideality of specific gravity and cohesion, i.e.—heat. The heating up of sounding bodies, just as of beaten and or rubbed ones, is the appearance of heat, originating conceptually together with sound.

Even a Monte Carlo engine could not sound as random as the great philosophical master thinker (it would take plenty of sample runs to get the mixture of “heat” and “sound.” People call that philosophy and frequently finance it with taxpayer subsidies! Now consider that Hegelian thinking is generally linked to a “scientific” approach to history; it has produced such results as Marxist regimes and even a branch called “neo-Hegelian” thinking. These “thinkers” should be given an undergraduate-level class on statistical sampling theory prior to their release into the open world.

MONTE CARLO POETRY

There are instances where I like to be fooled by randomness. My allergy to nonsense and verbiage dissipates when it comes to art and poetry. On the one hand, I try to define myself and behave officially as a no-nonsense hyperrealist ferreting out the role of chance; on the other, I have no qualms indulging in all manner of personal superstitions. Where do I draw the line? The answer is aesthetics. Some aesthetic forms appeal to something in our biology, whether or not they originate in random associations or plain hallucination. Something in our human genes is deeply moved by the fuzziness and ambiguity of language; then why fight it?

The poetry and language lover in me was initially depressed by the account of the “exquisite cadavers” poetic exercise, where interesting and poetic sentences are randomly constructed. By throwing enough words together, some unusual and magical-sounding metaphor is bound to emerge according to the laws of combinatorics. Yet one cannot deny that some of these poems are of ravishing beauty. Who cares about their origin if they manage to please our aesthetic senses?

The story of the “exquisite cadavers” is as follows. In the aftermath of the First World War, a collection of surrealist poets—which included André Breton, their pope, Paul Eluard, and others—got together in cafés and tried the following exercise (modern literary critics attribute the exercise to the depressed mood after the war and the need to escape reality). On a folded piece of paper, in turn, each one of them would write a predetermined part of a sentence, not knowing the others’ choice. The first would pick an adjective, the second a noun, the third a verb, the fourth an adjective, and the fifth a noun. The first publicized exercise of such random (and collective) arrangement produced the following poetic sentence:

The exquisite cadavers shall drink the new wine.

(Les cadavres exquis boiront le vin nouveau.)

Impressive? It sounds even more poetic in the native French. Quite impressive poetry has been produced in such a manner, sometimes with the aid of a computer. But poetry has never been truly taken seriously outside of the beauty of its associations, whether they have been produced by the random ranting of one or more disorganized brains, or the more elaborate constructions of one conscious creator.

Now, regardless of whether the poetry was obtained by a Monte Carlo engine or sung by a blind man in Asia Minor, language is potent in bringing pleasure and solace. Testing its intellectual validity by translating it into simple logical arguments would rob it of a varying degree of its potency, sometimes excessively; nothing can be more bland than translated poetry. A convincing argument of the role of language is the existence of surviving holy languages, uncorrupted by the no-nonsense tests of daily use. Semitic religions, that is Judaism, Islam, and original Christianity understood the point: Keep a language away from the rationalization of daily use and avoid the corruption of the vernacular. Four decades ago, the Catholic church translated the services and liturgies from Latin to the local vernaculars; one may wonder if this caused a drop in religious beliefs. Suddenly religion subjected itself to being judged by intellectual and scientific, without the aesthetic, standards. The Greek Orthodox church made the lucky mistake, upon translating some of its prayers from Church Greek into the Semitic-based vernacular spoken by the Grecosyrians of the Antioch region (southern Turkey and northern Syria), of choosing classical Arabic, an entirely dead language. My folks are thus lucky to pray in a mixture of dead Koiné (Church Greek) and no less dead Koranic Arabic.

What does this point have to do with a book on randomness? Our human nature dictates a need for péché mignon. Even the economists, who usually find completely abstruse ways to escape reality, are starting to understand that what makes us tick is not necessarily the calculating accountant in us. We do not need to be rational and scientific when it comes to the details of our daily life—only in those that can harm us and threaten our survival. Modern life seems to invite us to do the exact opposite; become extremely realistic and intellectual when it comes to such matters as religion and personal behavior, yet as irrational as possible when it comes to matters ruled by randomness (say, portfolio or real estate investments). I have encountered colleagues, “rational,” no-nonsense people, who do not understand why I cherish the poetry of Baudelaire and Saint-John Perse or obscure (and often impenetrable) writers like Elias Canetti, J. L. Borges, or Walter Benjamin. Yet they get sucked into listening to the “analyses” of a television “guru,” or into buying the stock of a company they know absolutely nothing about, based on tips by neighbors who drive expensive cars. The Vienna Circle, in their dumping on Hegel-style verbiage-based philosophy, explained that, from a scientific standpoint, it was plain garbage, and, from an artistic point of view, it was inferior to music. I have to say that I find Baudelaire far more pleasant to frequent than CNN newscasters or listening to George Will.

There is a Yiddish saying: “If I am going to be forced to eat pork, it better be of the best kind.” If I am going to be fooled by randomness, it better be of the beautiful (and harmless) kind. This point will be made again in Part III.