

JESSICA GOODFELLOW

A Pilgrim's Guide to Chaos in the Heartland

1. Road Trip

*It's a good idea to collect as much entropy as possible
before using a system.*

—Jon Callas, cryptographer

Because the horizon is not a number line,
because distance is an absolute value,
I use the atlas as an *I Ching*, a rune,
my calculations point to the Midwest,
as good a place as any.

Here in the disappearing prairie
I finally understand
how some infinities can be larger,
others smaller; how certain endless
quantities move closer to no end
faster than others.
Aleph Null—countable though infinite:
grass, sun, treelessness.
Aleph One—
uncountable and infinite:
dust, wind, fire. The distance
between here and God.

And this I did not expect,
that the loneliness would be countable.

My son wants a tumbleweed for a pet,
now one is buckled in the back seat.
What a clever boy, choosing to love
a thing already dead and rootless.

At the motel, he watches me
lower the blinds against
the white noise, the presence
of all possibilities in the night.
“It's such a lovely dark, Mama,” he says.

2. Devices of Chance

*Definition of Randomness: an inexplicable misfeature;
gratuitous inelegance.*

—www.gopher.quux.org: 70

Two Definitions of Randomness, Each Necessary but Not Sufficient:

Numbers in a string are random if they cannot be expressed in an2y shorter form.

But that is just poetry.

Numbers in a sequence are random if there is no patte6rn to them.

Is that unbel5ief or its absence?

Ways to Generate Randomness/Pseudorandomness:

throwi2ing dice, casting lots, flipping coins, d9rawing balls from
hoppers, drawing straws, picking num0bers from 1 to x, playing rock/
paper/scissors, consulting random number tables, spooling
algor9ithms through computers

getting out of bed in the morni7ng

A Short History of Dev7ices of Chance:

Casting lots (ancient and beyond history): object1s, cast to the earth, or
into a recepta0cle and then drawn out—pebbles or die, nuts or
barleycorn, tw9igs, bones, coins, cards, yarrow sticks, precious gems.
Once believed to reveal the will of god(s).

D3ice (circa 2750 BC, ancient Mesopotamia/the Indus Valley):
fashioned from clay and passed through fire, dotted with pips mu8ch
as today's.

The astralagus (earlier than 1320 BC, Egypt): dice-like bones with
four fac9es, each different in shape.

The quincunx (1823-4, Sir Francis Dalton, cousin to Darwin): the
theory of errors m3odeled by pellets, dropped through a vertical
maze of pins, landing in a bell shape that echoes the no9rml curve.

*The ancients, too, wanted to live as though there wasn't enou1gh random-
ness in live, as if it had to be sought out like a buried fam3ily secret, or
something feral; as though it wouldn't come looking for you in the night.*

These days we know the sources of pure randomness are few. We measure cosmic ray flux, light emissions from trapped mercury molecules, thermal noise from resistors, the decay of radioactive material.

Trapped. Resist. Decay.

3. Grasslands

And Aaron shall cast lots upon the two goats; one lot for the Lord, and the other lot for the scapegoat. . . . And the goat shall bear upon him all their iniquities unto a land not inhabited; and he shall let go the goat in the wilderness.

—Leviticus 16:8, 22

We haven't passed another car all day,
just the grasses undulating,
the winds ululating,
oceans of air drowning us.
In every direction
the startling sameness—
easy to get lost,
impossible to be lost.

Here in the New World
everyone wanders.

39787637

Fold the nation in half
lengthwise, endwise,
and the intersection,
the pivot point, the spot
where the map would crack first,
dead center, black hole,
is not far from here. 0

Perhaps from that spot, southwesterly,
a tornado is headed this way—
a conical tumbleweed,
a vortex, an altar,
a lot cast on the plains

Stooping down here, taking
this one, leaving that one.
The sky turns briefly green,
explodes with masses of ice,
the sound of ten thousand waterfalls,
white noise, masking our sounds,
chaff in the whirlwind.

Enter pure randomness:
Impossible to be
lost; where pointlessness
is the point.

4. Counting Backwards

White noise frequently isn't.

—Jon Callas, cryptographer

05181261

The Tall Grass Prairie States:

Nebraska, the Dakotas, Oklahoma, Texas, Wisconsin, Missouri,
Kansas . . . Starting that the parallel rows of parallel cornstalks,
I remember that over half of all Americans live in the state in
which they were born.

Behind me, my son begins counting backwards.

Common Uses for Counting Backwards: 9684996263
to test for aging-related declines, dyslexia, and, in Texas, drunk
driving; to increase concentration, to fall asleep, in meditation;
to heighten anticipation, as in announcing beauty pageant
winners or rocket launches
to connect with who you are with where you are

17683

How to Distinguish a Child from an Adult:

For a child, counting backwards is as easy as counting
forward.

An adult says, "Anything could happen," but is surprised when
it does. Or doesn't; the future as sure as the past.
Counting backwards is impossible: between any two numbers
there are infinitely many more. 097

Counting forwards is worse.

How to Tell If You Are a Mathematician:

If you think randomness is desirable and too rare, like rubies; if you chase entropy, like a butterfly once thought to be extinct, you are a mathematician.

86357

If you think randomness is as ubiquitous and welcome as dust, the common cold, tract housing; if you would run from entropy if only there were anywhere to run, you are not a mathematician.

Over half of all Americans are not mathematicians.

73548768095909

1173929274

1705

5. Crop Circles

There are several ways not to walk in the prairie, and one of them is with your eye on a far goal.

—William Least Heat Moon

Left, right, straight—
each crossroad seems momentous
yet insignificant. I
have long since lost
the atlas, let go fistfuls
of yarrow sticks out of the window
of the rental car, like dandelion
dander in the dry wind, cosmic
ray flux, light
Radiating from something trapped.

69572

5116877121

128

I am coming to the American midpoint,
the epicenter,
ground zero, the calm
at the eye of the storm.
Collecting entropy as I go.

76867

6. 015Random N6umber Tab8le

We know what randomness isn't, not what it is.

—William A. Dembski

813398851119929170310601080545571824063530342614867990743923
 403097328526977602020516569268665748187305385247186238857963
 573321350532547048905535754828468287098349125624737964575303
 529647783580834282609352034435273884359852017767149056860772
 109405586069093433505007399811805054313980827732507256824829
 405242015277567851834529963406288980831374670078184754061068
 711778178868540200865075840136766679519036476493296091106299
 594673488751764969918260892893785613682 *It* 347834113654811
 741746850950580477697473039571864021816544801243563517727080
 154531822374211157825314385537637435099817774027721443236002
 104552164237962860265569916268036625229148369368720376621139
 909440056418098932050514225685144642756788962977882254382145
 989149914523684792768646162835549475089923370892004880336945
 982694036858702973413553140333404205082341441048194985157479
 5432979 *is* 26575576004088122222064131255073742111000204012
 074697966448943928707258156360649329165053448440219525634365
 177082072073179061196904462645747774519243372965394595934258
 260527154744526695270799535936783848823961011833211594669455
 728573678975438154622444319119042592929274597342481162139734
 408721168684876703071120592570146670235237831 *a* 7732088983
 893591416262522966305522825620449352494752463382445862510256
 196279335653371247200549976546405188159961196389654692823912
 32872 *lovely* 952935963153072689809354333513546277974500249
 033933359808083914542726842836094970013021248927856520106460
 9092286772814407793910836477 *dark* 061742588523601394132179
 597873792524105567070078674317157853941183869234614062011745
 204159566000187439242397118963381956541430017587537940419215
 856667436806849628520745155149381947607246436679454359047900
 332082669541948643199436168108516488881553015403545605014511
 769808624826452402840444999088963909473407354413188033185162
 324194150949894354858188695419943754873043809510040696382707
 742015123387250162529894624611717975249140719612829669861025
 917485220539003845957918633325379814606571310102467405455614
 277793891936740294390277557322709779017119525275802180814517
 485417845611809933714305335129695612719255360409032411664498
 835207984827503817153909973334408846123356483247792831249647

Br12eathe.