

Evidence of control is all around us

Unedited posts from archives of CSG-L (see INTROCSG.NET):

Date: Tue Dec 21, 1993 9:21 am PST
Subject: Abnormal Physics

[From Bill Powers (931221.0820 EST)]

I predict that from now until June, the motto will be "Light, more light!"

Martin Taylor (931221) --

From me:

>> Control systems create abnormal physics.

From you:

> Why is this abnormal physics?

ABNORMAL PHYSICS

Balance a broomstick on end (the bottom of the unstable broomstick moves instead of the top).

Stand up in a gale (you lean into the wind instead of away from it).

Hold a bucket under a faucet until it's full (the supporting muscles shorten instead of the bucket descending as its weight increases to stretch the muscles).

Keep a marble spinning halfway up the side of a bowl. (Pick marble off table and put it in bowl. Pick up bowl. Move bowl in circle to make marble climb wall and circle at constant height. Maintain as long as you like).

Prevent a vortex from forming (Stick your finger in the middle).

Make the vortex spin half as fast (Stir gently with your finger).

Make an arm behave as if it had a different mass and as if the muscles had a different spring constant (Spinal control systems)

Climb a hill.

Drive a car 20 miles through traffic to a specific parking place.

Drive a car from Pagosa Springs to Alamosa over the San Juan mountains (Wow! Sure is lucky there was a road there. Sure is lucky the car stayed on it).

Put on a shirt and button it (highly improbable).

Arrange a shelf of books alphabetically by title, author, or call number. Or by color. Or by size.

Find some food and eat it (Note that the "energy stream" does not maintain itself).

Do a scratch spin on ice-skates and end up on one knee facing the judges.

Make a bed.

Make a chair.

Pump up a swing.

Sort socks into pairs.

Flip a coin and put it down showing heads 50 times in a row (probability 10^{-15})

Shake a coin in a bottle so it ends up heads 100 times in a row (stop shaking every time you see the coin at the bottom showing heads).

From a bowl containing 1000 white beads and 10 black beads, remove all the black beads without removing any white beads.

Place 100 beads in 200 bins with a bead in every second bin.

From a shuffled deck, deal a bridge hand in which each person ends up with Ace through King in a single suit.

Write your name.

Make a rubber ball rise off a table at constant vertical speed, make it pause 5 sec, and make it return at constant speed to the tabletop without bouncing.

Heat a pan of soup, with all objects in the room starting and finishing at a temperature lower than that of the soup.

Get out of a locked, barred room without picking the lock or breaking the bars (pay the fine).

All these abnormal physical behaviors of physical objects are made possible by the fact that you can sense things without disturbing them, and produce an action that will cause parts of the environment to behave in ways contrary to what would have happened if you not acted to control your perceptions. As a control system, you can produce acts which are not caused by antecedent forces, and hence are not simply part of a normal physical interaction. You can cause physical variables to covary with other physical variables in ways contrary to natural law. Of course the free variable in all these acts is your own behavior, your ability to create arbitrary forces unrelated to the forces that naturally occur. These forces are not caused in the normal way, but are based on extremely low-energy sensing processes which by themselves are incapable of producing any actions. Your thoughts and intentions cause the environment to exhibit unlikely relationships and outcomes, none of which would exist if it were not for the presence of living control systems.

There is one condition that is tacitly agreed to in doing any valid scientific experiment, in physics or elsewhere: hands off! If you're checking a chemical assay by weighing the products, keep your thumb off the scale. If you're timing the swings of a pendulum, don't breathe rhythmically or otherwise on the swinging bob. If you're using a mass spectrometer, leave your magnet at home. Scientific experiments are supposed to run by themselves, without the need for anyone to keep looking and nudge them along if they're not progressing right. To take any kind of purposive action during an experiment (other than designing it, setting it up, and turning it on) is cheating.

But we cheat all the time. The pictures on the wall didn't get there by any ordinary physical process. Breakfast doesn't appear on the table through any normal set of physical or chemical interactions. Lab equipment isn't a natural outgrowth of natural deposits of minerals. The oranges in the geometrical stack at the supermarket didn't climb up and arrange themselves. The probability of practically anything you find in your environment being what it is and where it is is incalculably close to zero. Abnormal physics. It's everywhere.

Best, Bill P.