

Race Towards Chaos

By Claire Pavlik Purgus

This morning I enjoy an expanse of desk table relatively uncluttered. I say relatively, because you should have seen it yesterday. It was covered with an accumulation of recent work: layers of papers and pencils and an assortment of things you would generally find on a desk. Yesterday I scooped them up in armfuls. Now my desk is reasonably clear. Sitting center-stage is one of contemporary physicist Fritjof Capra's books lying open, its pages highlighted in pink; a pair of reading glasses; a small red stapler; a calculator; a guide to my Epson printer that isn't scanning; a spiral notebook opened to the middle; a box containing Clean Mouse that has no more solution; and an unopened box containing new software. There are also knickknacks and photographs set back in the shadowy recesses of my desk where dust collects. The dust too is gone. For now.

It seems it is the nature of dust and disorder to quickly reinstate itself. Not long after I dust and vacuum my house – within minutes – dust is stealthily settling into its normal resting places upon shelves and floor. The same goes for clutter. Not long after I remove the clutter from my desk, for example, I notice it's moved to a new location on the bed. Not long after I clean off the kitchen counters, I find them covered in cookie crumbs, watermelon seeds, and sticky pools of honey, juice, or jam, black carpenter ants scurrying among it all, nibbling and tasting.

This tendency towards disorder is not limited to my house. It extends well into my yard and gardens, too. I wonder why weeds flourish but plants I've carefully and lovingly planted wither without constant care. It feels like only a few weeks ago – back in May – I diligently layered mulch over nine of my twelve garden beds. They looked perfect then and I felt I'd made some progress in the war against weeds. Certainly mulch would impede their growth, I thought, and I wouldn't have to spend every free moment of the summer weeding. That's what I thought.

Did I mention I didn't mulch three of my gardens? Well, they've collapsed into complete chaos. A few pinks and sweet williams peek out from among the crabgrass, goosegrass, and creeping charlie. These three gardens are now thickets of weeds. It happened while I was trying to stave off the clutter in the house.

Such is the way of nature and the universe. The second law of thermodynamics, as distilled by Capra in his book *The Turning Point* states that "any isolated physical system will proceed spontaneously in the direction of ever increasing disorder." This transformation from order to disorder is mathematically measured by entropy. The second law of thermodynamics

also states that entropy is characterized by increasing speed. An isolated physical system, therefore, gains momentum in its race toward greater disorder.

No kidding – this is clearly the case in my house and yard. But apparently it isn't confined to my little plot of land. Just look at the state of the world: chaos wrought by both man and nature! We have states of war over extensive regions of the Middle East and Asia. We have environmental destruction in China and Indonesia. Not long after we make peace pacts and create environmental legislation to ward off radical climactic changes when a new battle or disaster wreaks new havoc. I wonder if we're doomed to destruction. Is chaos and disorder the natural way of the world, as suggested by the second law of thermodynamics? Is Earth racing at an ever increasing speed towards a homogenous state of chaos over which we have no control? I wonder what the alternatives are. Perhaps it is we, the people, who create chaos. Perhaps the world's chaos is a manifestation of a confused collective mind; my house and garden's clutter and weeds an expression of my own jumbled thoughts. Perhaps.

Race Towards Chaos: Part II

As you may recall, I have been moaning about the weeds out of control in my garden and the dust and clutter out of control in my house. I've been questioning when I'll get the upper hand in house and yard work, wondering when I'll be in control of life instead of the other way round.

I am convinced clutter and weeds are only a tiny fragment of what happens globally – look at the state of the world – thanks to the planet's seemingly natural tendency towards escalating destruction and chaos, as set out in the second law of thermodynamics and humankind's propensity for foolishness and confusion.

But you may not agree. You may think the dust on my desk, the clutter around my house, and the weeds in my garden are things over which I have control. That's what my good friend and neighbor implied this afternoon after I waded through the weeds from my back yard to her back door. She handed me a pamphlet on time management. What does time management have to do with the state of my life, I thought to myself. Are the dirty dishes I see in the sink there because I haven't instilled upon my children the necessity of putting them in the dishwasher? Are the burgeoning weeds I see in the gardens there because I didn't mulch earlier in the spring? Is the thick layer of dust I see on my book shelves there because I don't dust often enough?

Maybe it *is* simply a matter of getting more organized. Maybe I *do* spend too much time worrying and not enough time doing chores. If you're like me, if you have a full-time job; if you have children and pets; if you have a home; if you have a car; if you have a yard and garden, you probably sympathize when I say there's not enough time in the day to keep it all under control and moving in the right direction, that is, towards more orderliness, not less.

The second law of thermodynamics aside, there are definite advantages to using our time wisely. Certain matters are critical and require our urgent attention. Our jobs for one – for many of us our jobs take up a good chunk of time; our families for another – children need care, feeding, and to be taken places; and ourselves – just a little TLC towards self by way of exercise, adequate sleep, and proper nutrition, for example. I don't know about you but these three things alone – job, family and a few good friends and self – gobble up all my time. Time management principals advise us not to waste time on unimportant things, like attending trivial meetings and spending needless time on phone-calls. Good time management suggests we avoid busywork, irrelevant mail, and persons who have a reputation as time-wasters. Good time management suggests we determine what's important and then prioritize.

If you're like me – a person who as a little girl couldn't decide what candy bar to buy at the grocery store – it's sometimes difficult to decipher between important and trivial stuff. Time management tells us to make lists of things we care about most. Things at the top of the

list, such as work and family, are high priority and should receive more time, attention, and energy than something at the bottom of the list. We should set goals for ourselves and write them down. Within key areas of our lives, we ought to determine what we want to do and learn to say “no” to things that don’t get us a little closer to achieving our goals. We should make weekly and daily schedules so we know what has to be done and what can wait.

If you’re like me, this barrage of *shoulds* and *oughts* is making you anxious; but that’s time management for you. Practice it regularly and it begins to fit and feel like a well-worn gardener’s glove.

Employing good time management skills won’t eliminate or alter the natural tendency things have to move from order to chaos. They won’t stop the natural lifecycles from creation to destruction. They won’t remove struggle from our lives or the possibility that “bad” things may happen to us. What good time management will do is help us maintain a little more control and order in our lives and help us focus on what’s truly important.

In the meantime, let’s try not to get bogged down in the dumps with chores and responsibilities and obligations. So the weeds can wait when dinner needs to be made; clutter can wait when children need help with their homework; dust, on the other hand, better not be ignored for too long.

And let’s also remember a proverb from Scandinavia, which led me to learn more about time management: go often to the house of thy friend, for weeds soon choke up the unused path.

Race Towards Chaos: Part III

The second law of thermodynamics as encapsulated by notable physicist Fritjof Capra in his book *The Turning Point* states that “any isolated physical system will proceed spontaneously in the direction of ever increasing disorder.” We see evidence of this law every day of our lives, and right now, it’s most apparent to me in my garden, where weeds abound, and my house, where clutter’s in mounds, not to mention the catastrophic chaos in the world.

I think a key word in Capra’s statement is the word *isolated*. Isolated systems will proceed spontaneously towards chaos. This may be true but we do not live in a world of isolated systems. We live in a world of systems connected to systems connected to systems ad infinitum. When we bear this in mind we can rephrase the second law: physical systems *tend* to proceed spontaneously in the direction of ever increasing disorder. If isolated from other systems, an ordered system’s *tendency* towards rapid collapse is more likely.

And so my garden, when left unattended, goes to weed. It becomes an isolated system vulnerable to the ravages of the second law. Overnight, weeds sprout and push their greedy roots and shoots into whatever space they find, pushing out the shy and more well-mannered plants. If I want a beautiful garden and well-manicured lawn, if I’ve put this near the top of my priority list of goals I wish to accomplish, I have to give it the time and attention it needs. The larger the garden and yard the larger the job gets. Till it’s overwhelming!

Ever notice how a job gets done more quickly when there are two or more of you? This spring my teenage daughter and I weeded and planted our vegetable gardens. It’s become a tradition that we must do together. I also employed my young son to help with the mulching. He rallied a few friends to help and before we knew it, the mulching was done. And you know, these kids did a better job mulching than I did – while I tried to stretch the mulch to cover all my twelve gardens, they piled it on hoping to get the job done faster. Now there are weeds where I mulched and none where they mulched.

But my real point is that we did it together. I couldn’t have done it without the help of my kids and their friends. Had I worked alone and in isolation, the job would have taken much longer. We mulched nine of my twelve gardens. Had I worked alone there would have been more than three remaining.

Isolated physical systems *tend* to spontaneously collapse into ever increasing states of chaos. The more connected we are to other physical systems the lower the odds are for uncontrollable calamity to set in. When we moved to southeastern Massachusetts three years ago from overseas, I feared the generally chilly New England demeanor would be a barrier to us making friends. I couldn’t have been more wrong. My neighbors have been so open and friendly to us that we feel we’ve lived here all our lives. We feel connected because we are

connected. And that connection – the support that comes with it – keeps the isolation woes away and impedes the natural tendency systems have to fall into chaos.

The Scandinavian proverb is worth repeating: go often to the house of thy friend, for weeds soon choke up the unused path. Go often. Connect.