

Diaries During Lockdown¹

Creating a “Double Bubble” in Rhode Island

June 10, 2020

Deborah reads a news feed from the Canadian Health Service reporting on the practice of “double bubbling” as a way to safely increase social contact during COVID-19. We decide to give it a try.

There are three separate living spaces on New Fadum Farm. Deborah and I live in the Little Red House (about 900 square feet) nestled up against the rail line. About fifty yards away, across Deborah’s vegetable garden, we can see the Old White Farmhouse and the Barnhouse. The White Farmhouse is where Deborah and I lived for 40 years, raised our daughters and built our lives. We were elated several years ago when our daughter and her husband approached us with an offer to buy the house. They now live there with our three granddaughters.



Figure 1: Old White Farmhouse and Barnhouse as seen from the Porch of the Little Red House on New Fadum Farm

The Barnhouse was our original animal quarters when Deborah first started with milking goats, a few sheep, some chickens, and rabbits. About twenty years ago when Deborah’s dad died, we converted the Barnhouse to a small apartment for Deborah’s mom and moved the last animals out back to the new animal barns. Through the years, the Barnhouse has hosted visitors, scholars on sabbatical, and generations of graduate students, most coming to study system dynamics at the University.

When the COVID-19 pandemic caused a general lock-down in our region, there were six of us living on the farm: Deborah and David in the Red House, our daughter, her husband and two children in the White Farmhouse. Last May a third granddaughter was born, so now seven of us are living in our “bubble” on New Fadum Farm. We call it a bubble because we have developed and observe a set of protocols for interacting with the world that we hope and expect will keep us safe and let us interact freely with each other inside our bubble.

The bubble is a great blessing. We share meals and find time to socialize, even around a campfire on warm summer nights. Almost every day our granddaughters come over the lawn by Deborah’s vegetable

¹ You can access all of the “Diaries During Lockdown” [here](#). “Diaries During Lockdown” is a network of professionally trained mathematical modelers (along with some of their friends and colleagues) who are using the tools of system dynamics and systems thinking to explain many of the complex choices facing individuals, organizations, and governments as we collectively grapple with the COVID19 pandemic. The apparent voice of this story is that of David Andersen, a retired Professor of System Dynamics and Public Policy who lives on New Fadum Farm. This voice is actually the synthesis of a number of different analysts and writers.

garden to visit with us. I especially enjoy working in the barn with our granddaughters. We recommend that, in these days of the pandemic, everyone try to create and live in as large a bubble as is safely possible.

That is why we got excited when Deborah read a news feed about the Canadian government's encouragement of "double bubbling". Our youngest daughter, with her wife and toddler son, had moved out of their apartment in Brooklyn to live with our daughter-in-law's family in Rhode Island. They had their own multi-generational bubble of seven persons living together on a small farm in a remote setting. After detailed thinking and planning and talking, we decided we could take the Canadians' lead and create a "double bubble" linking New Fadum Farm with a similar living unit in Rhode Island that observes almost identical safety protocols.

Deborah and I made the almost three-hour drive to Rhode Island without stopping. Voila! In doing so we had doubled the size of our bubble. We encourage others to carefully (*carefully!*) consider doing the same.

We haven't yet figured out how to safely extend our bubble to include our eldest daughter, who is one of the front-line heroes working in the Emergency room up in Saratoga.

This Story Has a Lesson: *A "double bubble" occurs when two households that know and trust each other well decide to merge into a single unit observing common protocols and safety standards. Double bubbling, if done well and carefully, can safely expand our deeply needed social contacts.*

Technical Modeler's Notes:

1. **Ali's CORONA1 Model.** You can download and run Ali's model here: [CORONA1.mdl](#). Please right-click on the file and select "Save link as ..." You will need to download a free version of the simulation software VENSIMPLE to open and run this model.

2. **Professional Presentations.** Ali's professional briefings with an introduction to his model and its conclusions can be found at [Spread of Corona](#), [Waves of Corona](#) and [Policies to control Corona](#).

[Read More to Dig Deeper](#)

Shortly after our trip to Rhode Island, we experienced some of the complications that can arise from a double bubble set up. Our daughter's niece, a toddler, is a frequent visitor to their bubble in Rhode Island. She had recently spiked a temperature and her pediatrician sent her for a COVID-19 test. Back in Upstate New York, we got a call about this turn of events and had to consider what this might mean for our own quarantine procedures. Were Deborah and I, having just returned from Rhode Island, obliged to isolate ourselves from the others within our New York portion of the double bubble? We breathed easier as soon we learned to our relief that the niece's elevated temperature was a false alarm. Her COVID-19 test result came back "negative." But what if it hadn't?