

Diaries During and After the Lockdown Project

A Story-Telling Approach for Communicating COVID-19 Dynamics to the Public

Project Synopsis: In April of 2021 we began a project designed to communicate insights from a system dynamics model of the COVID-19 epidemic to a non-modeling audience. We began with a simulation model, CORONA1, built by Ali Mashayekhi and calibrated to Iran. Over the following months we added several modules addressing additional behavioral and public health policy concerns. We wrote and published 20 stories in a blog-like format under the title of “Diaries During Lockdown”. Another 6 were published as “Diaries After the Lockdown”. The current model exists as 11 modules that develop insights about the pandemic in a step-by-step process. We have experimented with several social media platforms and are currently engaged in an effort to transform the project into a curriculum aimed at system dynamics students.

Focus of This Paper at the ISDC (1 of 4): We have prepared two applications papers and two work-in-progress papers to present this project at the 2021 ISDC. The four paper foci are **(1) A Description of our overall story telling approach (this paper)**, (2) A presentation of the technical details of the 11 modules in our current model, (3) A report on several experiments with social media and online presentations, and (4) A proposal to develop an instruction curriculum aimed at students of system dynamics.

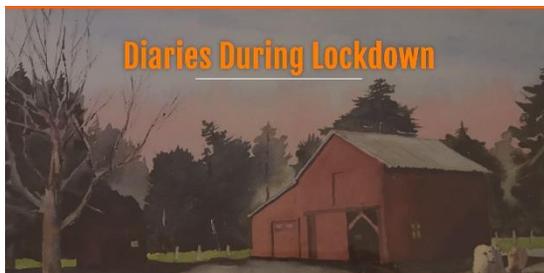


Figure 1: Logo of the Diaries During Lockdown Project

This project began on April 4, 2020 when Ali Mashayekhi called David Andersen to discuss how best to disseminate results from a system dynamics model of the COVID-19 pandemic that he had developed to brief public health officials in Iran. The next day, Palm Sunday, at a more broadly attended conference call most of our current team was assembled and we began work. In the year since then, we have been working to convey insights from a system dynamics model of the pandemic to a general audience by writing Diary Entries in a blog-like form, refining and developing our model, and most recently developing a series of 11 modules that can serve as the basis for a curriculum

aimed at students of system dynamics. This paper describes in general terms our work activities, our products, and our approach to disseminating dynamic insights.

An Application Aimed at Communicating to the General Public

The core of this work is presented as a PowerPoint show with 23 slides that we have used in the past to communicate the purpose and content of this application of system dynamics modeling. Below, we describe very briefly what is contained in these slides.

SLIDES 2-9: Overview and Preliminaries. The preliminary slides introduce the project and the members of our team. They briefly sketch the origins of the project including our debt to Dana Meadows and Garrison Keillor as master communicators. Finally, these slides identify who on the team was responsible for each segment of the work.

SLIDES 10-14: How the Stories are Set Up. All our stories appear as “Diary Entries” from a semi-fictionalized location, New Fadum Farm. All the stories have been cast in a standard format when published on the Web (e.g., all have a trailer, seek to keep to 800 words, always draw out a lesson at the end, and give online access to the original CORONA1 model). These five slides briefly describe the conventions that we have used to structure all the stories.

SLIDES 15-18: Examples of Lessons within a Single Story. These four slides walk the audience quickly through three of our Diary Entries to give a flavor of the different types of lessons that we seek to impart through a single story.

SLIDES 19-24: Meta-Lessons. As the project emerged, we realized that these stories are about more than the results of our simulation model. We kept coming back to the importance of mental models in guiding behavior, the importance of being aware of how local action unfolds from a global system perspective, and the importance of keeping focused on data both to build and calibrate a model as well as to live safely during the pandemic. These slides sketch how we approached these larger ideas, culminating in some reflections on why adherence to behavioral protocols is so important during the pandemic.