

Communicating Complex Issues Using **Storytelling**

Presented by
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Storytelling Session Overview

Storytelling helps you to...

- Create better **client understanding** and **buy-in** to recommendations
- Develop **Systems Thinking skills** in your clients/students
- Identify areas in your models that may need improvement

In this session we will cover...

1. How to present **model structure** using storytelling
2. How to create effective and **engaging stories**
3. How to experientially **link dynamics to structure**
4. Your interests through **Q&A**

Mechanics covered include...

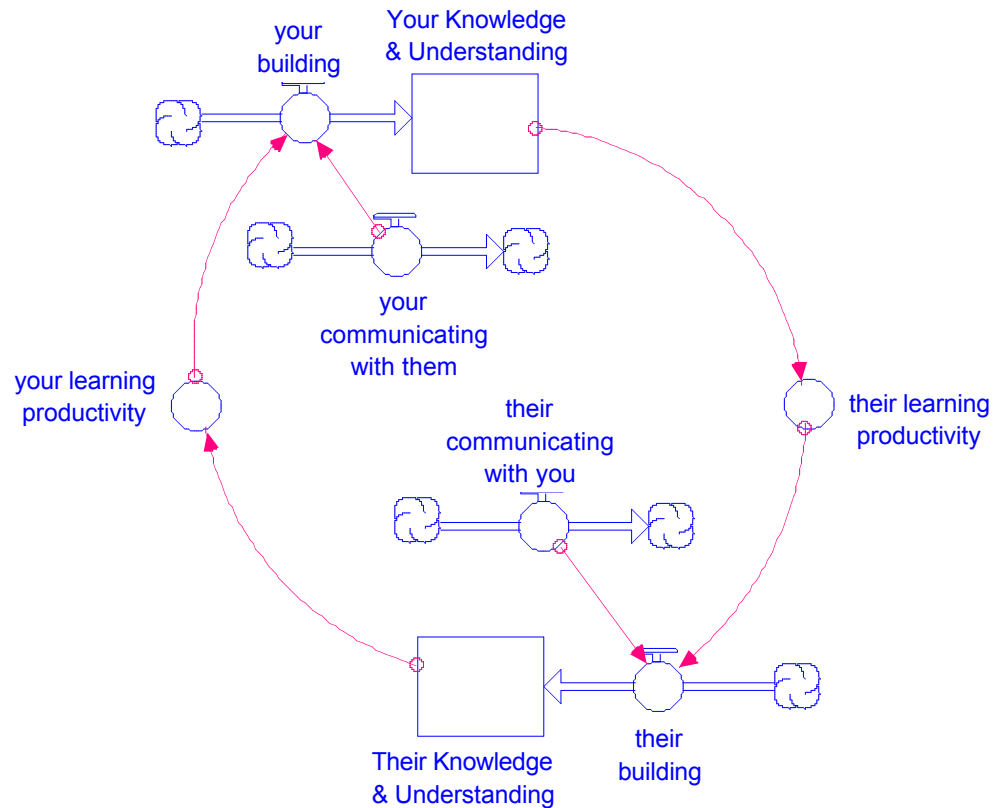
- Adding elements to a story
- Grouping and rearranging elements in the story sequence
- Adding buttons to navigate and simulate
- Annotating your stories as they unfurl
- Highlighting feedback loops
- Creating multiple chapters
- Understanding the equation logic used by **iThink/STELLA**

Expectations

- There are a lot of **concepts** and **mechanics** to cover
- I'll present the **basics** of both
- Provide you with some **examples**
- Expect you will **ask questions** as we go to direct what I cover!!

Big Picture

Communicating increases learning productivity



Storytelling increases model-based communicating productivity

Big Picture

(continued)

	Presenter/Teacher	Learner
Presenter Present	<i>Deliver interactive lectures</i> <ul style="list-style-type: none"> Lectures become more engaging Learners “see” the subject matter 	<i>Learner delivers reports</i> <ul style="list-style-type: none"> Learner reports become more engaging
Presenter Absent	<i>Learner exercises (lab, classroom, distance)</i> <ul style="list-style-type: none"> Distance learning potential Homework 	<i>Learner developed reports</i> <ul style="list-style-type: none"> Share mental models across schools/cultures Builds learner empathy and communication skills

Good Storytelling should...

Establish the *Context*

Framing Skills	<i>Dynamic Thinking</i>	<i>10,000 Meter Thinking</i>	<i>System-as-cause Thinking</i>
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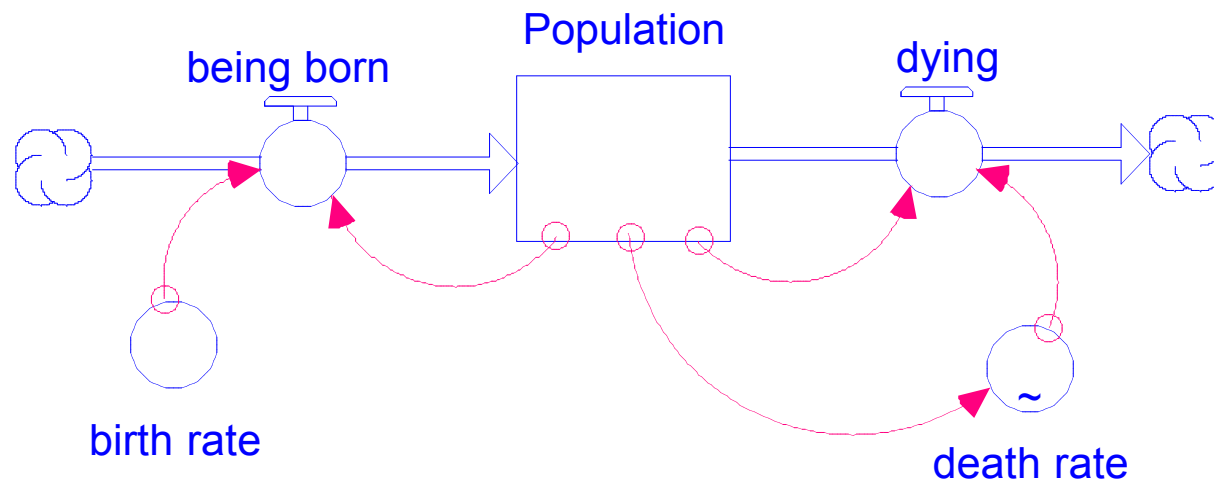
Set Boundaries

Build **motivation**
for **learning**

- Support effective learning → **Actively build operational understanding**
 - Generate questions
 - Provide hooks into common stories or other well known topics
 - Give audience ability to casually link structural assumptions to behavior
 - Develop a visual that's imprinted on the brain – easy to recall artifact

Mechanics

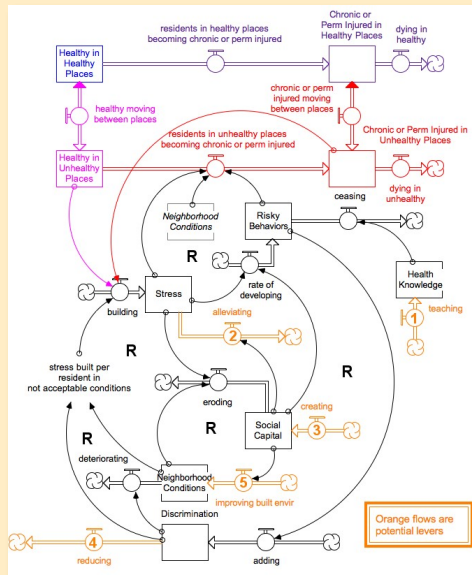
Here's the model we'll be using in the storytelling tutorial



The Art of Good Storytelling

Requires 2 Skillsets

1. Building well-constructed and aesthetically-designed models



2. Good storytelling principles and mechanics



Guidelines for Good Storytelling Models

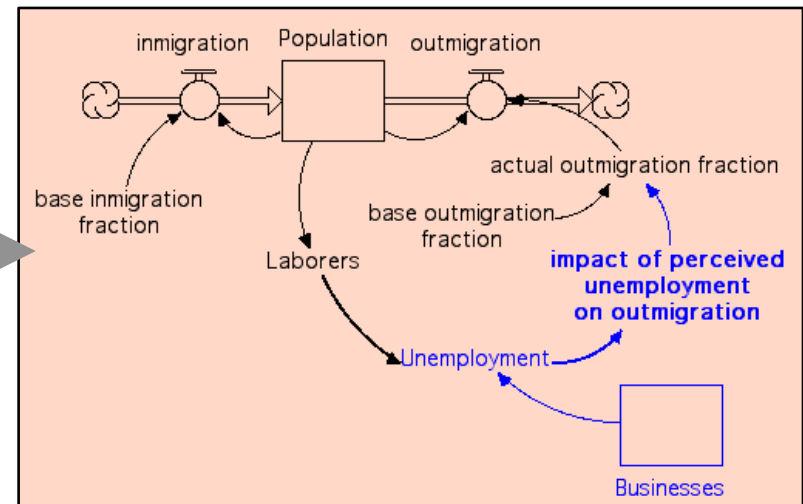
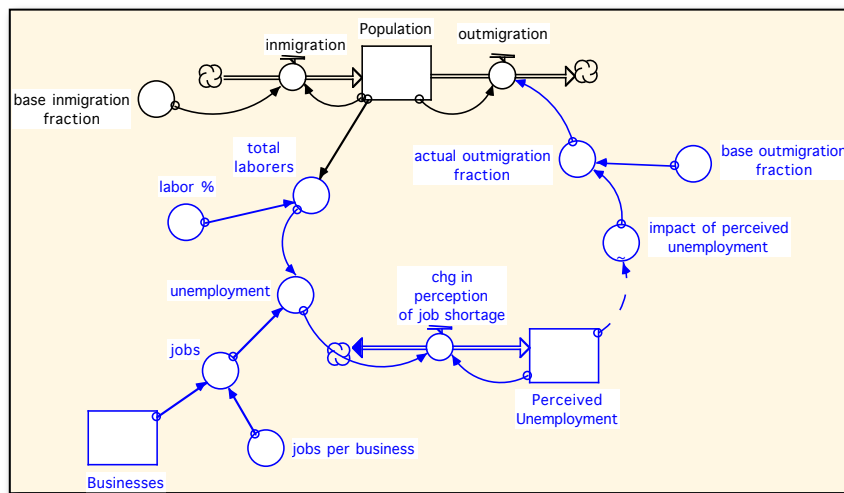
What makes a model good for storytelling?

1. One screen!
2. Is the model “as simple as possible...but no simpler?”
3. Do any wires cross? If so, explore ways to avoid this without, if possible, making use of ghosts
4. Does the flow of stuff move from left to right (i.e. most/all inflows enter stocks from the left)
5. Are stocks first-letter capped, and flows all small letters? Do the names make sense?
6. Are flows “ing” named?
7. Are flows specified using *generic flow templates* (are there “dead buffaloes?”)? Have appropriate constants been “buried?”
8. Are key feedback loops easily identifiable?
9. Are converters changed to “word only” (unless you want to communicate graphical relationships?)
10. Are there long chains of converters? If so, have appropriate use of Modules been applied?

Guidelines for Good Storytelling Models

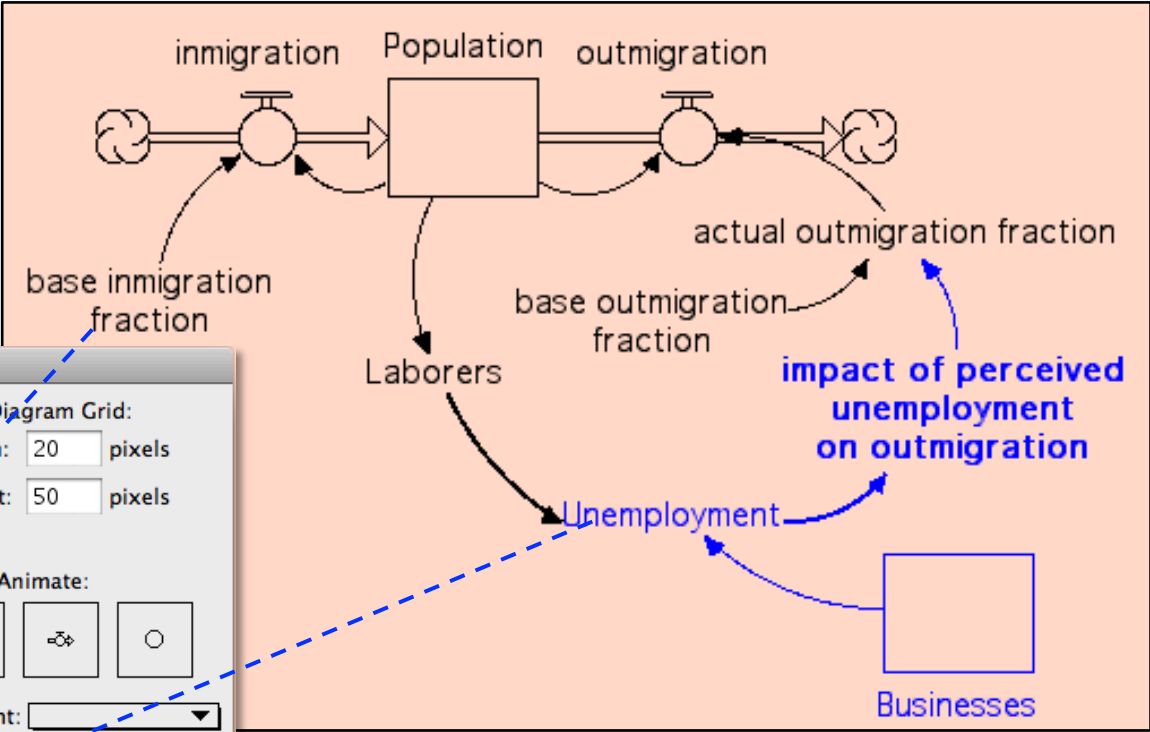
Using Modules to increase “readability”

This model can become... ...this “easy to read” model with a module.



Which is likely better suited for some audiences!

Using "Name only" options makes your stories easier to read!



Model Preferences

Diagram Size:
Width: 1 page(s)
Height: 1 page(s)
Total Pages: 1

Page Sequence:
 1 2
3 4
 1 3
2 4

Diagram Grid:
Width: 20 pixels
Height: 50 pixels

Options:
 Show pages
 Disable Posters
 Disable Gray Drawing
 Hide Poster Titles
 Division by Zero Alert
 Opaque Decision Diamonds
 Enforce Unit Consistency
 Show Numerical Values on Hover
 Update Numeric Displays Once per Time Period
 Save Run Output to File
 Disable Discrete Animation
 Use Lettered Polarity
 Name Only Modules

Converters:
 Large
 Medium
 Small
 Name only

Animate:

Name Font: [dropdown]
Name Size: 9 pt

Cancel OK

Storytelling Principles



- Bias toward beginning with a stock (condition).
- Engage mental simulation as you go...to motivate “mental model” building
- If unfurling stocks, one at a time works best unless...
 - they are part of a conserved stock flow chain, in which case you could show a couple at a time.
 - they are symmetrical (e.g., if showing populations of two countries, could put down both stocks at once).
- In general, add one flow at a time.
- Add no more than one converter/connector assembly at a time.
- Use conveyors to intuitively show physical delays.
- Add draining “wire,” or other elements likely to confuse, when unfurling the Run button—averting the eye from a potentially confusing, and not highly relevant, detail.

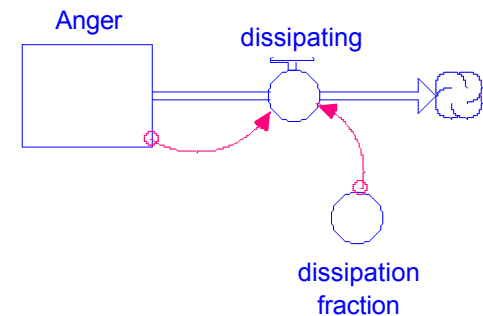
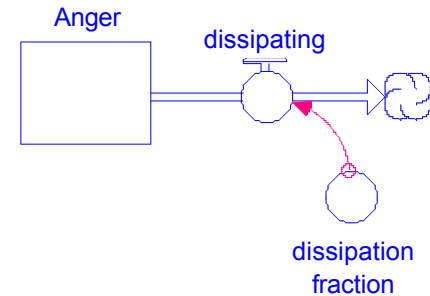
Storytelling Principles (continued)

Design Principles (continued)

Add draining converters or other elements likely to confuse as you unveil a Run or Navigate button. This avoids unnecessary attention to a potentially confusing detail.

For example, where a stock generates its own outflow, you might first show external elements driving the flow...

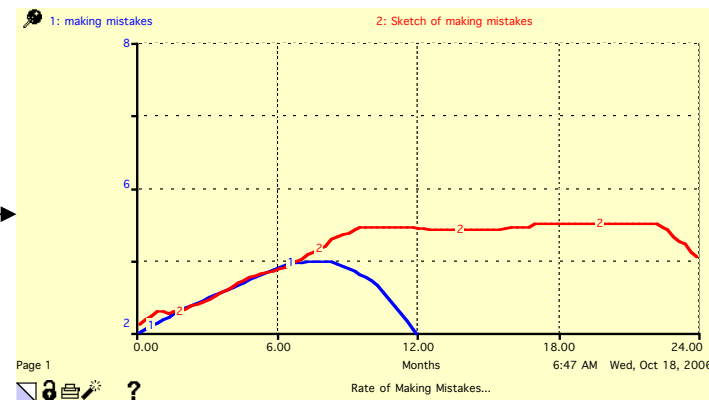
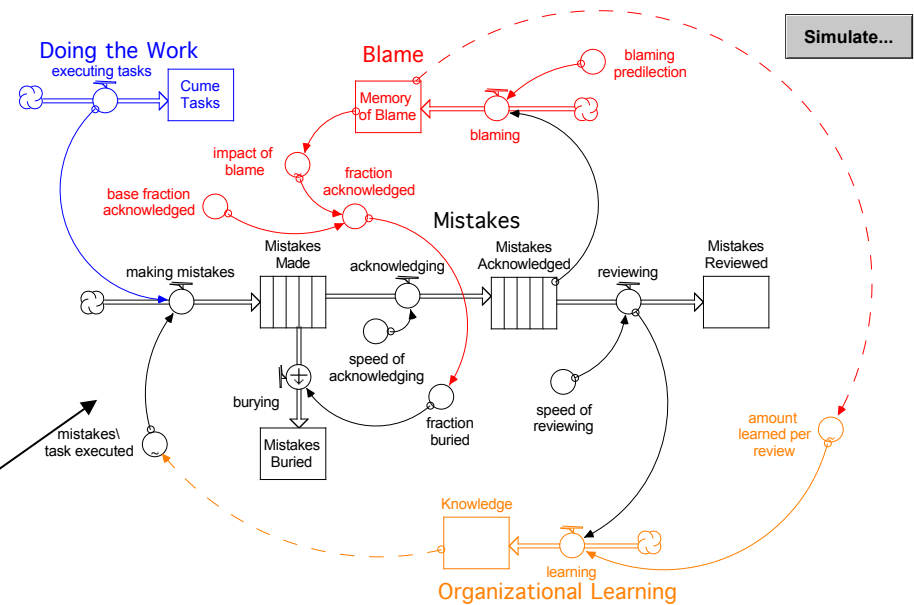
...then when adding the simulate or run button(s) you can also add the connector from the stock to its outflow.



Simulate

Storytelling Principles (continued)

- Simulate as soon as the structure that is showing, or has just been added, contributes a useful step in the structure/behavior progression.
- Simulate one policy change at a time.
- Make judicious use of colors (make “sectors” within the model different colors). Use titles to label sectors.
- Pose a question prior to simulating...you may wish to consider having the learner make a sketch (using *sketchable graphs*) prior to simulating.



Q&A

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Storytelling