Systems at Work & Play: Holism in an Agile World

Wil Wade
How It Works in the HOME
Systems all the way down
I sometimes say that generalists are the most specialized people of them all, so specialized they can’t in fact do anything. Except make observations of that nature.

- Tyler Cowen
Language
A structure of [things] connected by [relationships] that produces behaviors.
Not a System
The relentless building block video puzzle.

TETRIS

FROM RUSSIA WITH FUN!

Nintendo

Entertainment System
New Blocks → Falling Speed → Height of Fallen Blocks → Cleared Rows → Placement Quality
Height of Fallen Blocks vs. Time

Game Over

Speed of Falling Blocks
Language
Non-linear
Conway's Game of Life
Conway's Game of Life

Dead

Alive

0 or 1 neighbors

3 neighbors

4+ neighbors

not 3 neighbors

2 or 3 neighbors
Conway's Game of Life

- Blocks are simple [things]
- Four simple rules [relationships]
- Lots of behaviors
Agile

- Change is Good
- Small Steps
- Feedback Loops
- Cross Functional Teams
A structure of [things] connected by [relationships] that produces behaviors.
Non-linear
Three Keys to Understanding Systems
Right vs. Wrong
AC vs. DC
Vim vs. Emacs
Right vs. Wrong
Right vs. Wrong
(Really) Useful

Thomas the Tank Engine

THE RAILWAY SERIES NO. 2

THE REV.W. AWDRY
Discovery vs. Creation
Temporary Assumptions
Weak opinions, weakly held
Three Keys to Understanding Systems
Modeling: The Very Short Version
Look for [things]
Look for [relationships]
Can you explain behaviors?
Time
Incentives Matter
Goals
Picking Boundaries
Modeling: The Very Short Version
Common System Problems
Delayed Feedback
Limits
Systems are Resilient
Systems are Resilient

Until they aren’t
Unintended Side Effects
Common System Problems
A structure of [things] connected by [relationships] that produces behaviors.
Questions?

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Resources:

- *Thinking in Systems: A Primer* by Donella Meadows
- *Once Upon a Complex Time: Using Stories to Understand Systems* by Richard Brynteson
- *System Thinking - Creative Holism for Managers* by Michael C. Jackson
- *How It Works in the Home* by Walt Disney Productions