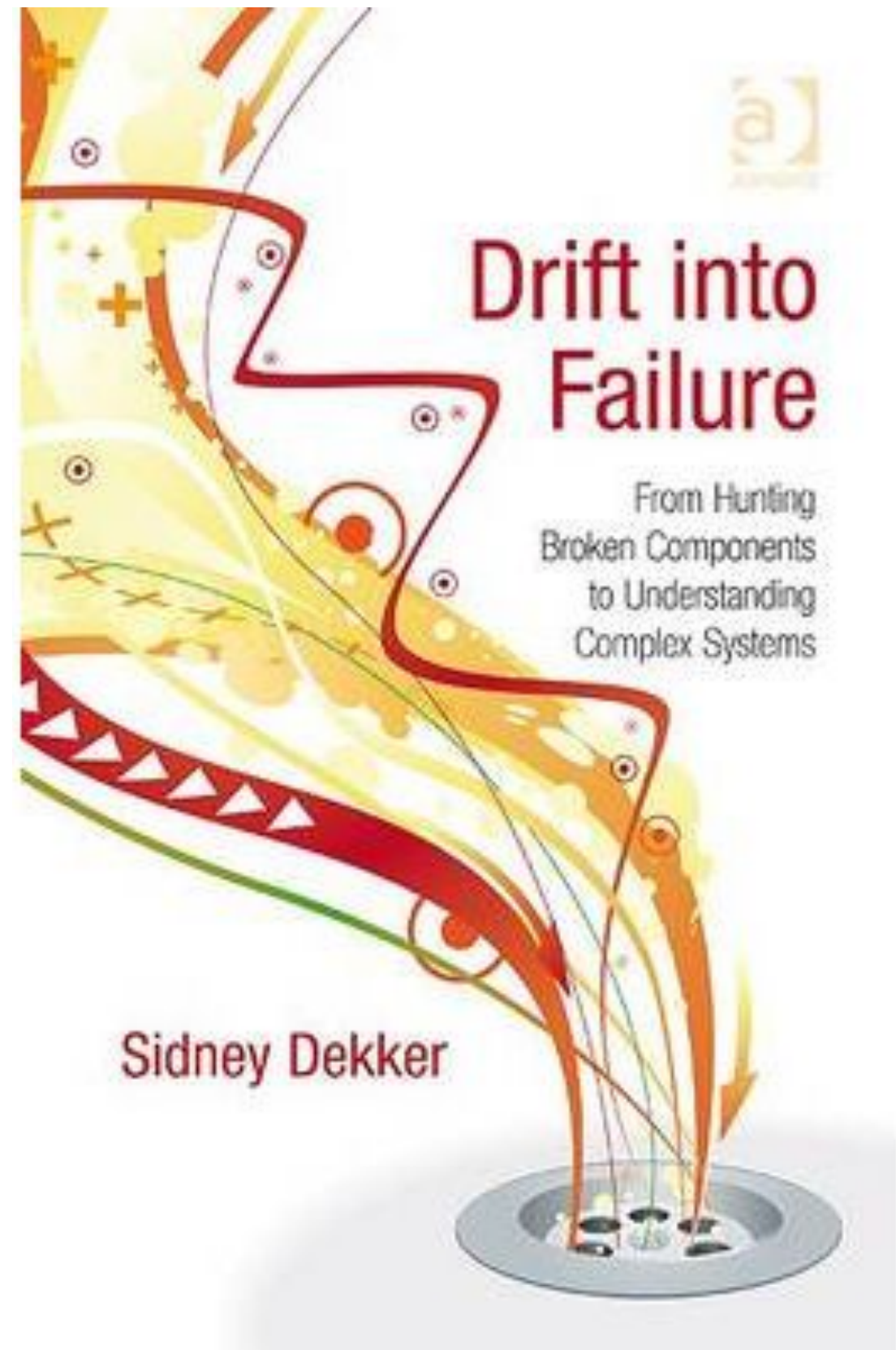


Drifting Into Fragility

Matt Provost
Weta Digital
[@hypersupermeta](#)

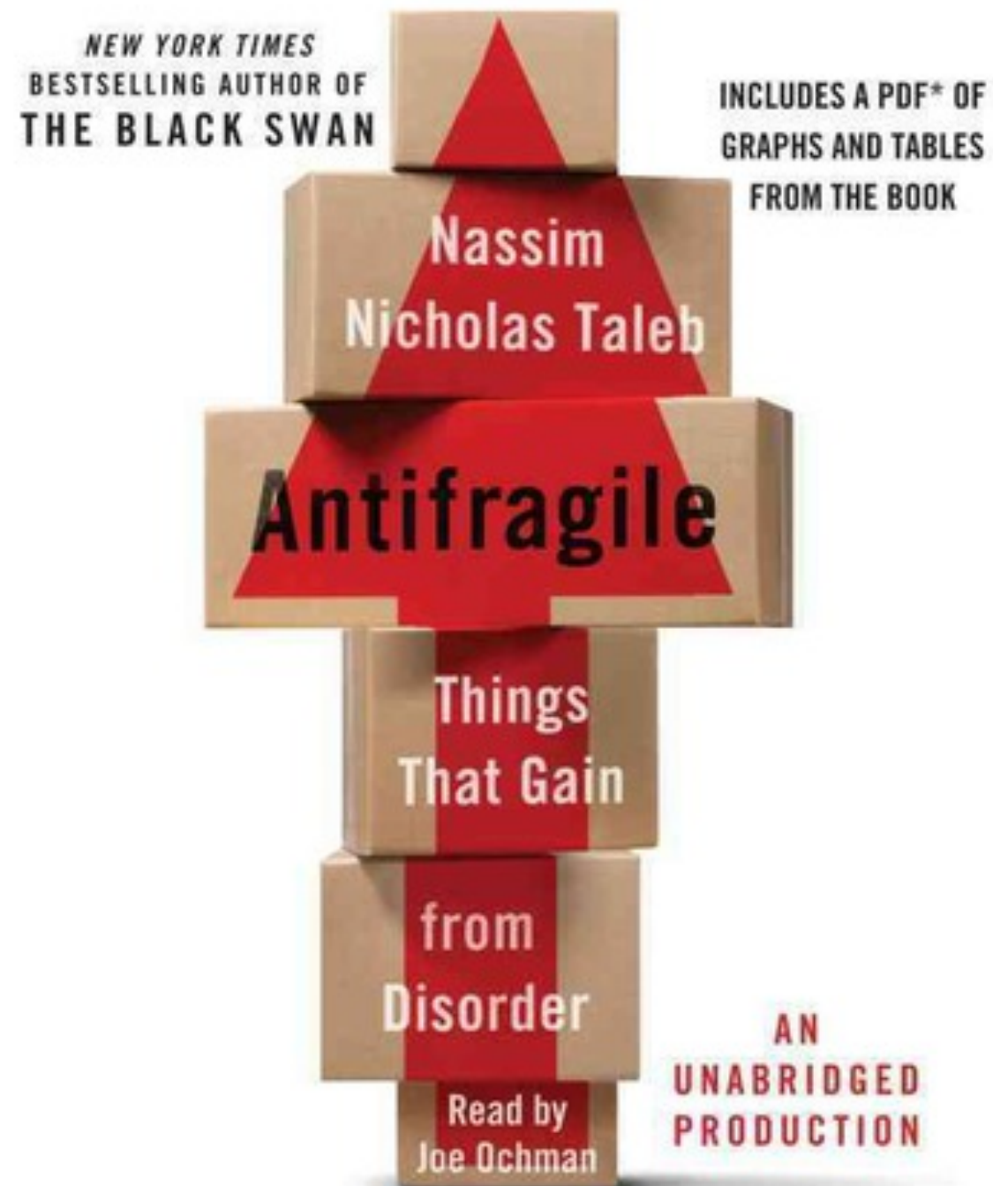
Drift Into Failure

Sydney Dekker
2007



Antifragile

Nassim Nicholas Taleb
2012



Newtonian-Cartesian Reductionism

Rational Choice Theory

Soviet-Harvard Delusion

Fragile
Robust
Antifragile

Open Systems

Butterfly Effect

State

Eureka Part

Newtonian Ethic of Failure

The root cause of the problem was a latent bug in an operational data collection agent that runs on the EBS storage servers.

Amazon - October 22, 2012

As with any complicated operational issue, this one was caused by several root causes interacting with one another and therefore gives us many opportunities to protect the service against any similar event reoccurring.

Amazon - April 29, 2011

Decrementalism

We had tested this upgrade on a number of similar devices without incident, so we had a good deal of confidence.

Github, December 26, 2012

We regularly will shut down one or a small handful of routers when we are upgrading a facility... However, this morning we encountered a bug that caused all of our routers to fail network wide.

Cloudflare - March 03, 2013

Fortunately, we've built our network with redundant switches in each server cabinet and each server is connected to both of these switches.

Github - December 5, 2012

While SimpleDB can handle multiple simultaneous node failures, and has successfully endured larger infrastructure failures in the past without incident, the server failure pattern in this event resulted in a sudden and significant increase in load...

Amazon - June 13, 2012

latrogenics

Naive Interventionism

We must do something.

This is something.

Therefore we must do this.

Procrastination

Bricolage

Evolution











U.S. AIR FORCE

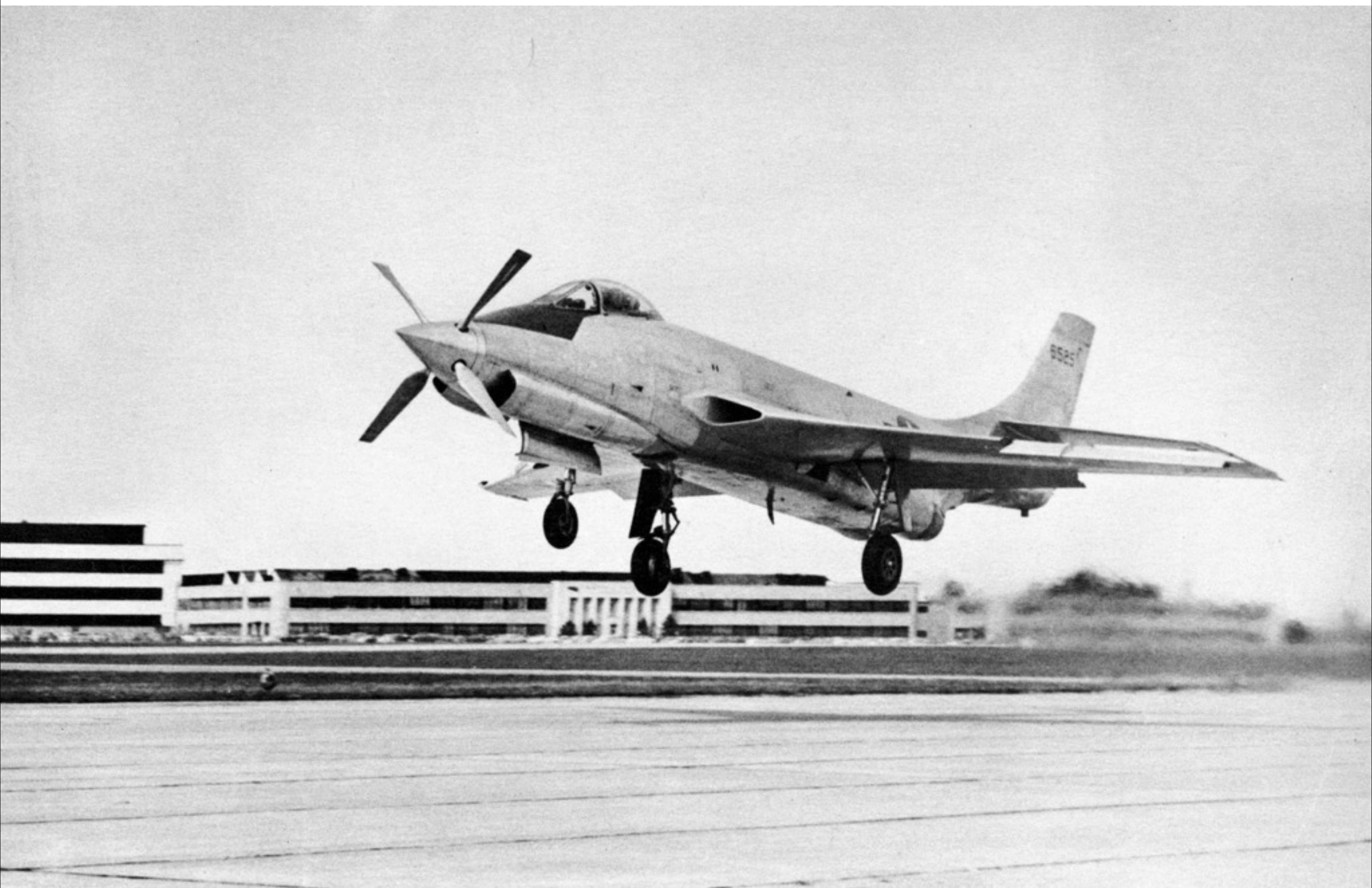
630

Jeppetinhem

OHIO AIR GUARD



22630





Antifragile



<http://www.flickr.com/photos/nyuhuhuu/>



Heuristics

hosts files
cronjobs
static routes
cargo cult reboots
root login
symlinks

Up and Out

Thank You