

# Measuring Chaos

Chaos Engineering and Team Health

Paul Osman  
@paulosman  
Velocity Berlin 2019  
#velocityconf

# Paul Osman

@paulosman

Sr Manager, SRE at Under Armour

Previous lives: PagerDuty, SoundCloud, 500px

Paul Osman

@paulosman

Velocity Berlin 2019





## MapMyFitness

With over 35 million users, MapMyFitness is the largest digital fitness community in the world, and it's still growing.

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## MyFitnessPal

Over 100 million dedicated users and 3 billion foods have made this the world's leading nutrition tracking app.

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## Endomondo

Over 20 million of the most dedicated fitness enthusiasts have made Endomondo the #1 personal training app.

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“Chaos Engineering is the discipline of **experimenting** on a system  
in order to build **confidence** in the system’s capability  
to withstand turbulent conditions in **production.**”

– *<https://principlesofchaos.org/>*

# In Practice

**Paul Osman  
@paulosman  
Velocity Berlin 2019**

**Confirming Known Knowns**

**Testing Known Unknowns**

**Finding Unknown Unknowns**

# Game Days

# Smaller Experiments

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**@paulosman**  
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# Assumptions

This talk will apply to teams who:

- Develop services that have to be running 24/7
- Are on-call for those services
- Have a range of expertise related to the services they own

# **Why do we care about team health?**

**Being on-call is stressful**

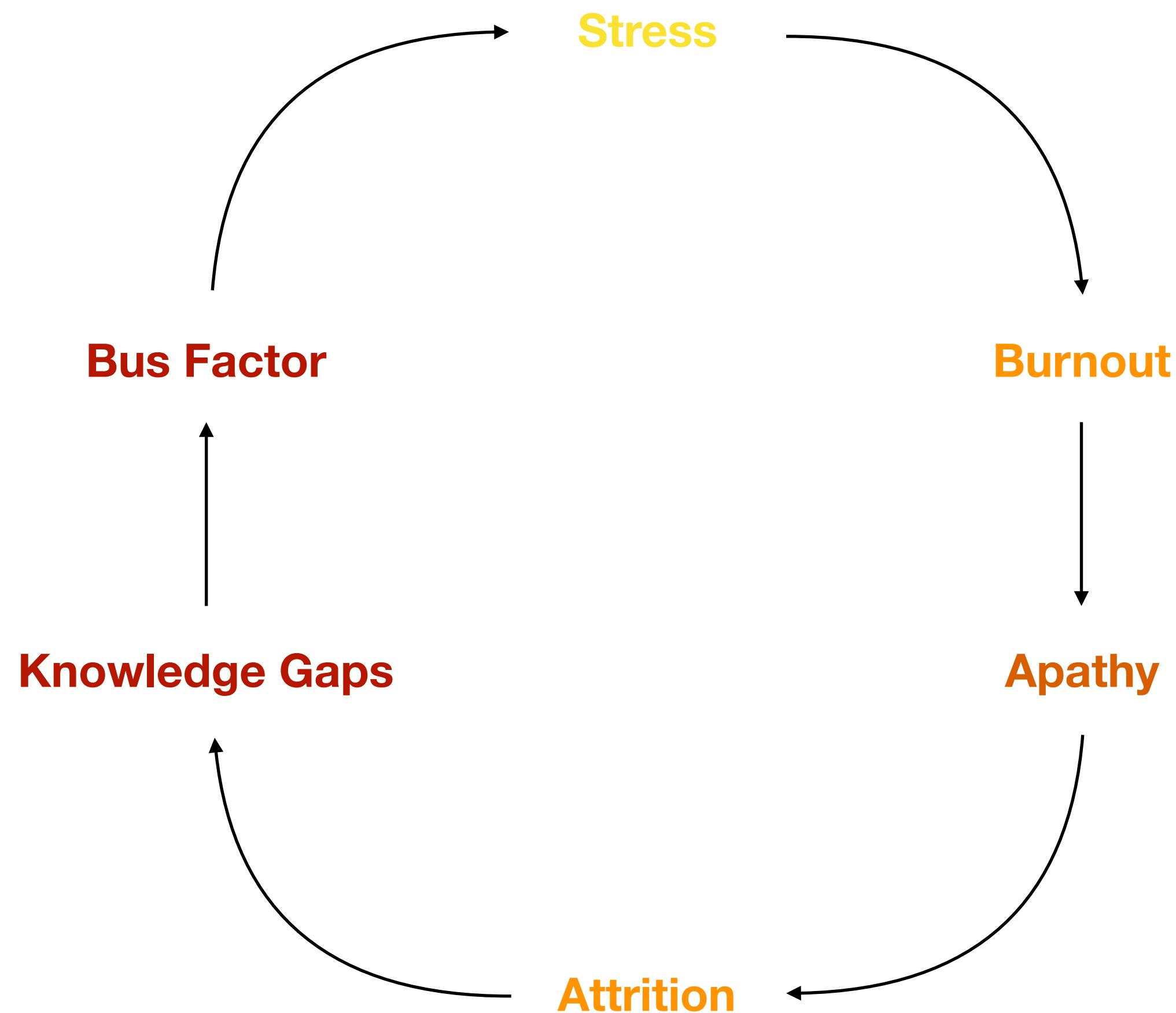
**Incidents can be traumatic**

**Trauma lasts**

**Stress  
Degrades  
Performance**

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@paulosman  
Velocity Berlin 2019**

# Feedback Loop of Doom



Having a burned out teammate is like having a database cluster rapidly running out of disk, except it's ***way harder to fix*** and has ***worse long-term consequences***

# **People are part of the system**

above



*the line*

below

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**@paulosman**

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<https://www.youtube.com/watch?v=3P5wuxIOcMY>

# Practical Chaos

# Engineering

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# “Incidents are unplanned investments”

- John Allspaw, Adaptive Capacity Labs

# **WARNING!**

This talk advocates collecting qualitative data\*

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\* qualitative data is known to cause extreme discomfort in some engineers and many executives

# Tip # 1

Use Game Days to Verify and Validate Work Done

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# Tip # 2

## Designing Chaos Experiments is Useful

# Signal

## Ownership Gaps

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“Untouchable” Components

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We don't have time

# Tip # 3

## Post Game Day Surveys

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Discover mythologies

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# Tip # 4

Treat game day write ups like post incident write ups

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Put Analytics on Them - Track Engagement

# Tip # 5

Use insights from incidents to plan chaos experiments

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Team is learning together

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# Tip # 6

**THEATRE DU CHAOS**

**Administration**

**Sonnez S.V.P.**

# Tip # 7

Identity advocates and empower them

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# Signal

## Chaos Eng Happening without You!

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@paulosman  
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# Tip # 8

## Use Chaos Experiments in Onboarding

## **Summary**

**Stress negatively impacts organizational performance**

**Chaos Engineering can give engineering teams a sense of empowerment**

**Designing experiments can help unearth signals about a teams health**

**Decentralize, empower, elevate**

# Rate today's session

The screenshot shows a session page from a conference website. At the top, the title 'Cyberconflict: A new era of war, sabotage, and fear' is displayed in red. Below it, the speaker is identified as 'David Sanger (The New York Times)'. The session time is '9:55am-10:10am Wednesday, March 27, 2019' and the location is 'Ballroom'. A blue circle highlights the 'Rate This Session' button, which is located below the speaker information. A blue arrow points from this button to the corresponding 'SESSION EVALUATION' button on the mobile app screen. Other visible elements include a 'See passes & pricing' button, a 'Add to Your Schedule' link, and a 'Notes' and 'Remove' button at the top right.

Session page on conference website

The screenshot shows the O'Reilly Events App interface. At the top, there is a '✓ Attending' button, a 'Notes' button, and a 'Remove' button. Below this, the session title 'Cyberconflict: A new era of war, sabotage, and fear' is shown along with the time '9:55 AM - 10:10 AM, Wed, Mar 27, 2019'. A blue circle highlights the 'SESSION EVALUATION' button at the bottom of the screen, which is also indicated by a blue arrow pointing from the website's evaluation button. The app also displays the speaker's name 'David Sanger', their title 'National Security Correspondent', and their affiliation 'The New York Times'. The location 'Ballroom' is also listed. A 'Keynotes' section is visible at the bottom.

O'Reilly Events App



@paulosman



/in/paulosman



paul@eval.ca

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