Part 1 — When Pressure Improves Performance (and When It Doesn't)

On the evening of October 21, 2009, an Airbus A320 cruising at 37,000 feet fell unexpectedly silent. For more than an hour, Air Traffic Control made repeated attempts to reach the flight deck of Northwest Flight 188 as the aircraft passed well beyond its destination of Minneapolis–St. Paul.

There was no mechanical failure. No medical emergency. No weather threat.

Instead, the flight was operating in a low-workload cruise environment—one so quiet and routine that the crew's attention drifted away from the fundamentals of monitoring and communication. By the time contact was reestablished, the aircraft had overshot the airport by more than 150 miles.

This was not a breakdown caused by excessive stress or high workload.

It was the opposite.

Situations like this are not anomalies. They are predictable outcomes of how human performance responds to changing levels of arousal — a relationship first described more than a century ago and still highly relevant to aerospace today.

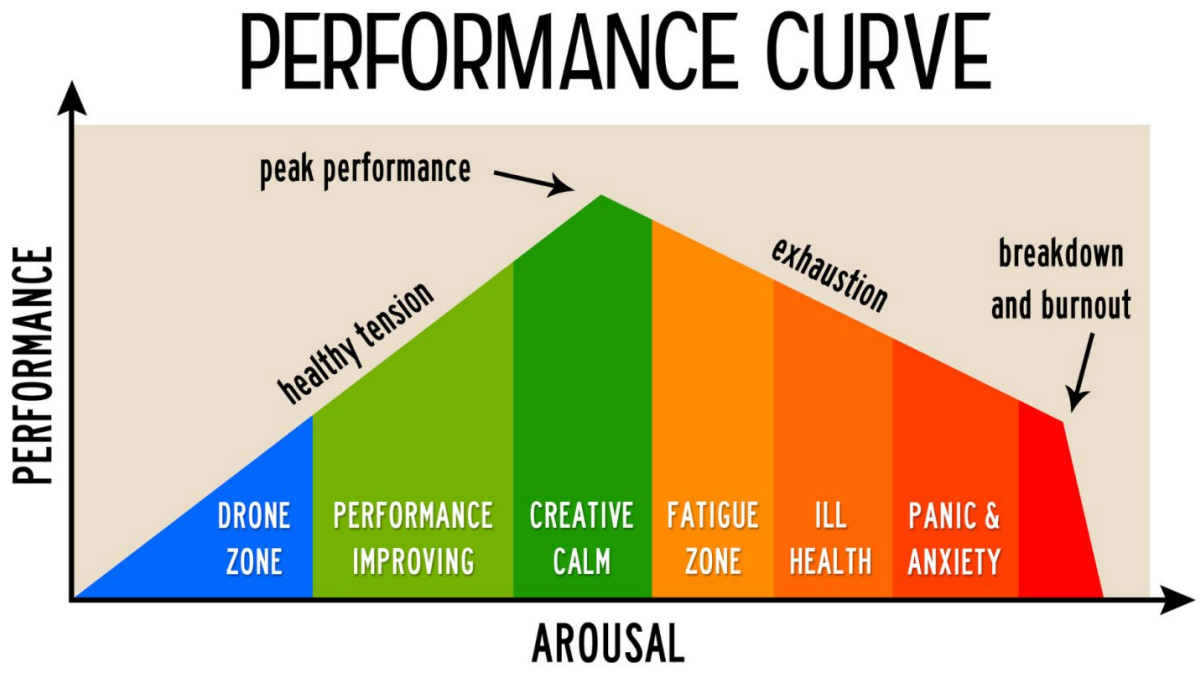
The Performance–Arousal Relationship

In 1908, psychologists **Robert Yerkes** and **John Dodson** identified a fundamental principle of human performance:

performance improves as arousal increases — up to an optimal point — and then declines as arousal becomes excessive.

This relationship, now known as the **Yerkes–Dodson Law**, is often visualized as an inverted-U curve. While it is frequently referenced in discussions about stress and burnout, its left side is just as important — and far less discussed.

Too little arousal can quietly erode performance.



The Risk of Under-Arousal

At low levels of arousal, individuals may appear calm, comfortable, and unpressured. But beneath that surface, attention can drift, vigilance declines, and situational awareness weakens.

In aerospace operations, under-arousal often shows up as:

- Over-reliance on automation
- Reduced monitoring discipline

- Missed cues or delayed recognition
- Assumptions that “everything is normal”

Routine environments can lull even experienced professionals into passive engagement. The absence of urgency does not eliminate risk — it simply makes it harder to see.

Where Performance Improves

As arousal increases, performance improves. Focus sharpens. Communication becomes more deliberate. Teams actively manage threats rather than react to them.

This middle portion of the curve represents **healthy tension** — a state where individuals are:

- Alert but not anxious
- Engaged but not overwhelmed
- Focused without being rushed

Peak performance does not look frantic.

It looks **calm, disciplined, and intentional**.

The Leadership Influence

Leaders play a decisive role in where teams operate on this curve.

Clear expectations, meaningful accountability, purposeful challenge, and active engagement help move teams out of complacency and into the optimal performance zone — without introducing fear or unnecessary pressure.

Effective leaders do not eliminate pressure.

They **apply it deliberately and proportionately**.

A Question Worth Asking

Are your teams truly engaged — or simply comfortable?

In Part 2, we'll examine what happens when pressure continues to rise beyond the optimal zone, how performance begins to degrade, and why leaders often miss the warning signs until margins have already eroded.

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Reference

Yerkes, R. M., & Dodson, J. D. (1908). *The relation of strength of stimulus to rapidity of habit-formation*. Journal of Comparative Neurology and Psychology, 18, 459–482.