

TEAM EFFECTIVENESS

Modern Empirical Evidence

Project Aristotle · Duhigg · Woolley · Pentland

PAPER 03 / 03

A Furtherance reference compendium on the intellectual traditions behind organisational design, leadership, execution, and culture.

IN THIS PAPER

The series closes with the modern, data-rich evidence on what actually makes teams perform. Large internal studies and sensor-based research have converged on a striking conclusion. The question it answers: after decades of theory, what does the measurement say drives team performance?

Project Aristotle put Google's data behind psychological safety; Duhigg carried the finding to a mass audience; Woolley showed that collective intelligence is a real, measurable property; Pentland quantified the communication patterns behind it. The verdict is consistent: *how* a team interacts beats *who* is in it.

Project Aristotle Google, 2012–2015

People analytics · what makes a team effective

CORE THESIS

Google's large internal study found that **who** is on a team matters less than **how** the team works together. Of five key dynamics, **psychological safety** was by far the most important – corporate confirmation of Edmondson's construct at scale.

FRAMEWORK

Key dynamic	Meaning
Psychological safety	Safe to take interpersonal risks – by far the most important
Dependability	Members reliably deliver quality work on time
Structure and clarity	Clear roles, plans and goals
Meaning	The work matters personally to members
Impact	Members believe the work makes a difference

METHODOLOGY

An internal people-analytics study of nearly two hundred Google teams.

SIGNIFICANCE AND CRITIQUE

A large-scale corporate validation of psychological safety as the top team factor. The critique: it is a single company in one sector, and the findings are correlational and self-reported.

Charles Duhigg Smarter Faster Better, 2016

Science journalism · productivity and teams

CORE THESIS

Synthesising the research – and reporting Project Aristotle for a wide audience – Duhigg argued that a team's **norms**, especially those that create psychological safety, matter more than its raw talent, and set the finding within a broader account of individual and team productivity.

FRAMEWORK

Theme	What it holds
Team norms	How members treat each other predicts performance
Psychological safety	Equal voice and responsiveness are the key norms
Mental models	High performers picture what should happen next
Stretch + SMART goals	Pair an ambitious goal with a concrete one

METHODOLOGY

A journalistic synthesis of academic research and organisational cases.

SIGNIFICANCE AND CRITIQUE

Made the evidence accessible and actionable for a mass management audience. The critique: it is popular synthesis rather than original research.

Anita Woolley *Collective Intelligence, 2010*

Organisational behaviour · the “c factor”

CORE THESIS

Groups have a measurable **collective intelligence** – a general factor that predicts performance across very different tasks. Strikingly, it is **not** well predicted by the average or peak individual intelligence of members; it depends on how the group interacts.

FRAMEWORK

Predictor of collective intelligence	Effect
Social perceptiveness	Members who read others well raise group intelligence
Equal turn-taking	Balanced conversation beats a few dominating
Group composition	Diversity, linked to social sensitivity, helps

METHODOLOGY

Controlled studies measuring group performance across batteries of tasks, since replicated.

SIGNIFICANCE AND CRITIQUE

Rigorous, surprising and replicated evidence that group process outweighs individual brainpower. The critique: the studies use laboratory tasks, and the mechanisms are still being worked out.

Alex “Sandy” Pentland *Social Physics, 2014*

Computational social science · MIT Media Lab

CORE THESIS

The **patterns of communication** in a team are the single strongest predictor of its performance – more than intelligence, personality or the content of what is said. Measured with wearable sensors, the best teams show a distinctive interaction signature.

FRAMEWORK

Communication dimension	Signature of high-performing teams
Energy	Everyone contributes and responds – many exchanges
Engagement	Communication is spread evenly, not hub-and-spoke
Exploration	Members also connect outward, beyond the team

METHODOLOGY

Sensor-based (“sociometric badge”) measurement of real interaction patterns at scale.

SIGNIFICANCE AND CRITIQUE

Quantified team interaction and converged independently with Woolley on equal participation. The critique: the approach is measurement-heavy and raises real privacy questions.

Synthesis

Contribution	Method	Key finding	Caveat
Project Aristotle	Corporate analytics	Psychological safety is first	One firm; correlational
Duhigg	Journalistic synthesis	Norms beat talent	Popular synthesis
Woolley	Controlled studies	Collective intelligence is real	Lab tasks
Pentland	Sensor data	Communication patterns predict performance	Privacy; measurement-heavy

FOR THE OPERATOR

The modern evidence converges: how a team interacts beats who is in it. Psychological safety tops the list (Project Aristotle, popularised by Duhigg), collective intelligence rests on social sensitivity and equal turn-taking (Woolley), and communication patterns – equal participation, energy, exploration – predict performance (Pentland). For the operator: engineer the interaction – safety, equal airtime, clear structure – and you engineer the performance. That closes the Team Effectiveness series, converging directly with the Trust and Psychological Safety series elsewhere in this library.