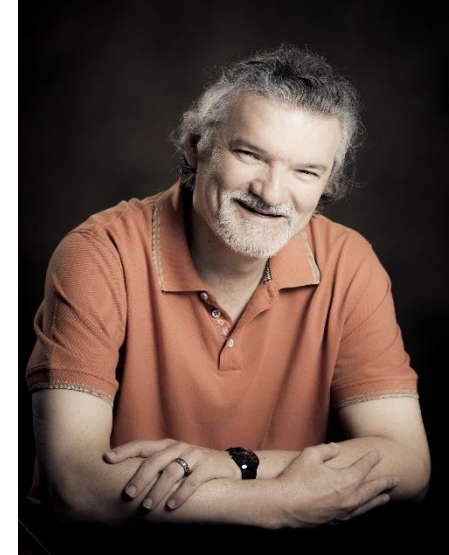


APA

EMERGING LEADERSHIP

ACADEMY

# **The Science of Teamwork**



**Drs. Scott Tannenbaum and Eduardo Salas**  
**The Group for Organizational Effectiveness and Rice University**

**DECEMBER 2, 2020**

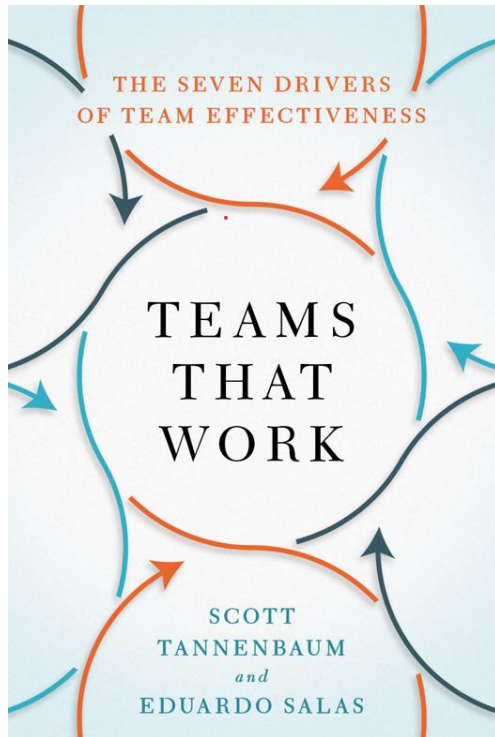
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the group for organizational effectiveness

[www.groupoe.com](http://www.groupoe.com)



# The Science of Teamwork:

## Enabling Teams to Thrive

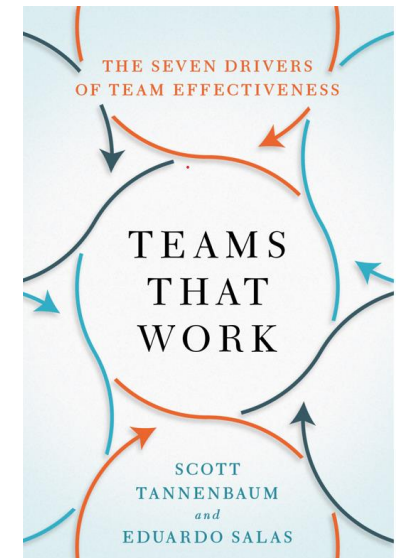
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Scott Tannenbaum and Eduardo Salas

Presented at APA's Emerging Leadership Series 2020

# Welcome and Intent

- Describe some of the **psychological science** that underlies teamwork (and related research findings)
- Share a few practical **ways to apply** the science of teamwork at work



# Participating with Chat and Q&A

When you see this symbol...



...we'd like your input using the **Chat** capability

We also leave time for questions at the end –  
so submit questions using the **Q&A** capability

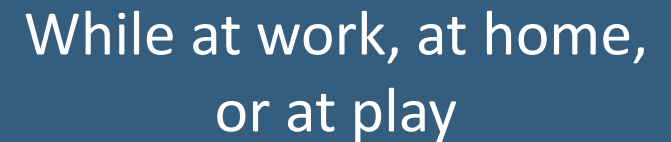
# About You

What types of teams do you belong to or work with? Including:

- Teams you are a member of
- Teams you lead
- Team you support (or facilitate)



Chat



While at work, at home,  
or at play

# Two Quick Observations

*“No individual can win a game by himself.”*

- Pele



# Observation #1



Organizations are using teams more than ever and collaboration expectations are rising

- All types of teams...Stable, temporary, co-located, virtual

**Time spent in collaborative activities has ballooned 50% or more (Cross et al, 2016)**

**Deloitte study (2016) of 7000+ orgs reveals move towards more team-based designs**

# Observation #1

Whether you like teams  
or not...they're here!



Organizations are using teams more than ever and collaboration expectations are rising

- All types of teams...Stable, temporary, co-located, virtual

Time spent in collaborative activities has ballooned 50% or more (Cross et al, 2016)

Deloitte study (2016) of 7000+ orgs reveals move towards more team-based designs

# Observation #2



Unfortunately, many teams perform sub-optimally

Organizational View	Personal View
Ineffective teams hurt our results	Being on an ineffective team drains my energy – I don't want to be on another team

***92% view teams as critical, but only 23% view own team as effective  
(Davie, 2013)***

# Observation #2



Unfortunately, many teams perform sub-optimally

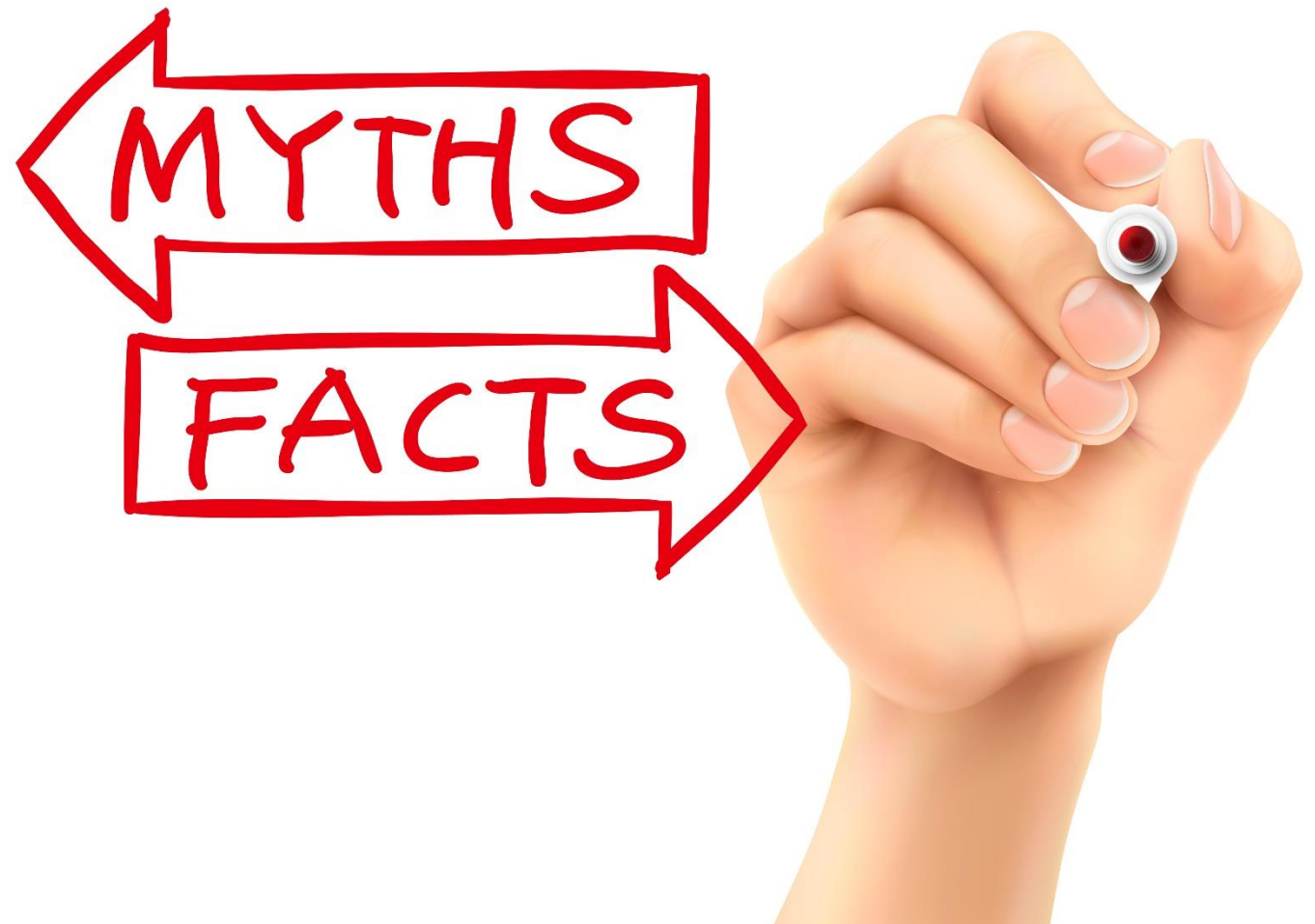
Organizational View	Personal View
Ineffective teams hurt our results	Being on an ineffective team drains my energy – I don't want to be on another team

***92% view teams as critical, but only 23% view own team as effective (Davie, 2013)***



***The intensity of shared experiences, good and bad, is amplified (Boothby et al., 2014)***

# Four Myths About Teamwork



# Myth 1: Focusing on teamwork is a distraction

**“We don’t have time for teamwork, we have a business to run!”**

- Name protected



- Teamwork is how work gets done
  - Meta-analysis of 130 studies -- better teamwork processes **20 to 25% more likely to succeed** (LePine et al., 2008)
  - Teamwork breakdowns prime source of **errors** (e.g., Institute of Medicine, 1999)
  - Orgs that boosted collaborative performance had 5% greater annual **revenue increases** (CEB, 2013)

Teamwork  Distraction

Myth 2: If team members like each other and maintain harmony, the team will be successful

# Myth 2: If team members like each other and maintain harmony, the team will be successful

- Talent matters. How we work together matters. A little discord isn't bad!
- Simply hanging out together doesn't boost performance. Just ask **Google**
- Don't expect that celebrating a birthday together or time spent socializing will cure role ambiguity, competing priorities, or insufficient talent

Teamwork



True teamwork boosts performance  
– not just “feel good”



# Myth 3: Being a team player means suppressing individual excellence

- You can be a team player **and** an individual success
  - 50% of top collaborators were rated top performers (Cross et al, 2016)
  - Australian Special Forces (Gayton & Kehoe, 2015)
    - Being a “team player” #1 predictor of success!



# Myth 4: Teams are always the answer

# Myth 4: Teams are always the answer

- We're not advocating the formation of more teams
  - Don't **default to forming a team** without ample thought
- When a team is asked to do something that would be **better handled by an individual...**
  - The experience is likely to be bad, the results suboptimal, and people will incorrectly assume that teams don't work
- Teams work when deployed for the **right reasons**



# Based on your Experience

If the myths are false....



**What makes an effective team so effective while other teams struggle?**

Chat

# Based on your Experience

If the myths are false....

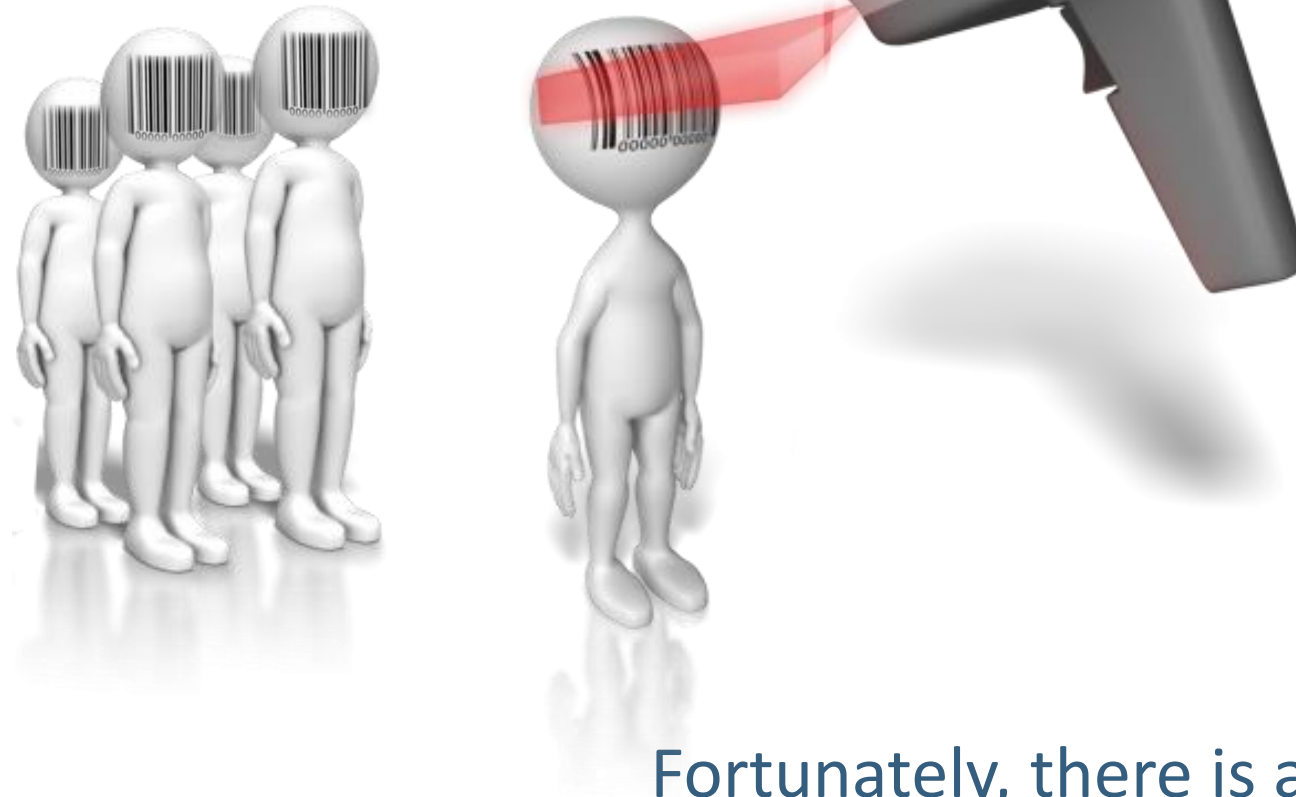


Chat

What makes an effective team so effective while other teams struggle?

**THINK:** Are the best teams great on day one?

We need to “crack the code” for  
team effectiveness...



Fortunately, there is a strong, growing  
body of team research to help us!

# Choose a Team to Think About

It could be a team that you lead or one you are (or were) a member of



**THINK:** How does  
our team compare  
to what Scott and Ed  
are telling us?

# The Science of Teamwork

Almost 50 meta-analyses published



*"Teamwork makes the dream work  
in space flight."  
- CMDR Scott Kelly*



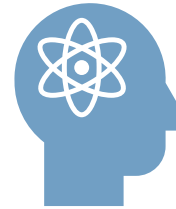
# The Seven “C’s” of Teamwork (Drivers)

Driver	Key Question
1. <b>Capability</b>	Right <b>people</b> with the right mix of KSA’s?
2. <b>Cooperation</b>	Constructive <b>attitudes</b> about this team?
3. <b>Coordination</b>	Demonstrate necessary teamwork <b>behaviors</b> ?
4. <b>Communication</b>	<b>Exchange info</b> effectively with each other and outside?
5. <b>Cognition</b>	Possess a <b>shared understanding</b> (e.g., priorities, roles, vision)?
6. <b>Coaching</b>	Leader and/or team members demo <b>leadership behaviors</b> ?
7. <b>Conditions</b>	Have favorable <b>conditions</b> (e.g., resources, culture)?



**Capability**

=



Knowledge, skills, and  
attributes (including  
personality)

# Findings Related to Competence

- **Individual competence** matters – hard to overcome big talent gaps
  - Smart (Stewart, 2006), talented (Aguinis & O'Boyle, 2014), and capable helps
- But, adding **stars** won't always boost performance (Swaab et al., 2014)
  - In interdependent teams, past threshold can hurt performance – (chickens too!)
- **Teammates** and **conditions** also play a big role...

# Findings Related to Competence

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- **Teammates** and **conditions** also play a big role...



Star financial analysts who change orgs suffer performance decline!

- Particularly if they moved without their “team” (Groysberg & Lee, 2008)
- And to an org with less favorable conditions (Groysberg, Lee, & Nanda, 2008)

On average, how long do you think it took them to get back to their prior level of performance?

Chat

# Findings Related to **Collective Orientation**...

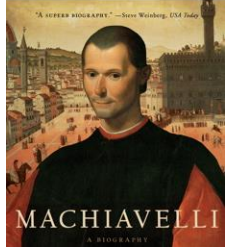
Capability

- **Collective Orientation** - likes being on a team, “team first”
- Related to team **performance** (Driskell, et al., 2010)
  - Our view...Need *enough* team players
- Remember...Can be team player **and** individual success
  - 50% of top collaborators rated top performers (Cross et al, 2016)
  - Australian Special Forces (Gayton & Kehoe, 2015)

**Tip:** When choosing team members, assess teamwork orientation and not simply technical expertise

# Findings re: Personality - Toxic Teammates

- ***Machiavellian***
  - Manipulation acceptable, very cynical, expediency above principle
- ***Narcissism***
  - Over inflated self-worth, inaccurate beliefs about control, want self-love shared by others, see themselves as superior
- ***Psychopathy***
  - Lack of concern for others, high impulsivity, lack of remorse; often great “impression managers,” can be charismatic



Machiavellian



Narcissism



Psychopathy



Dysfunctional  
Behavior

Meta-analysis of 245  
samples  
O'Boyle et al., 2012

Machiavellian



Narcissism



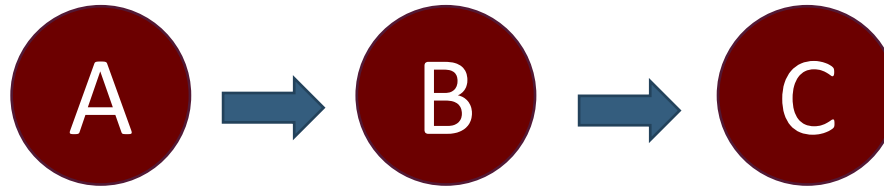
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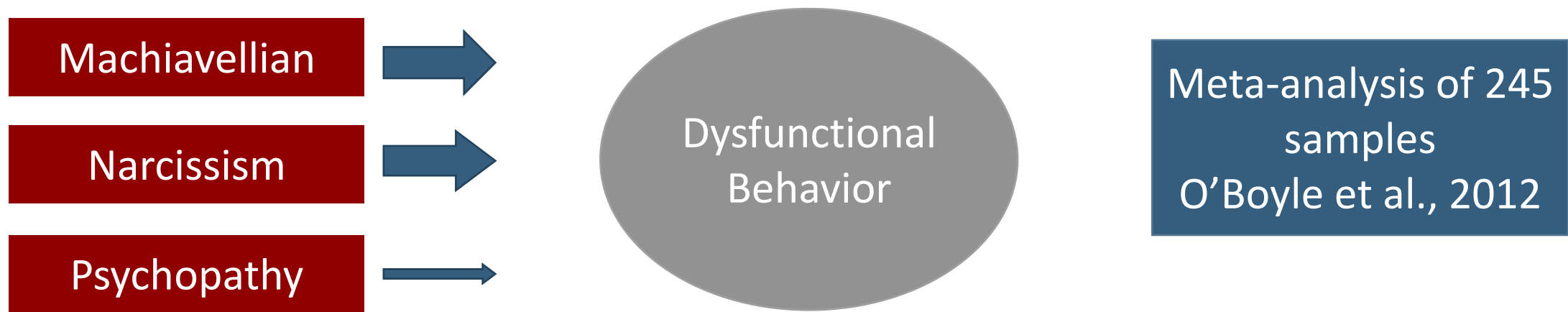
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Negativity/Rudeness  
can spread through  
“emotional contagion”



Dezecache et  
al., 2013





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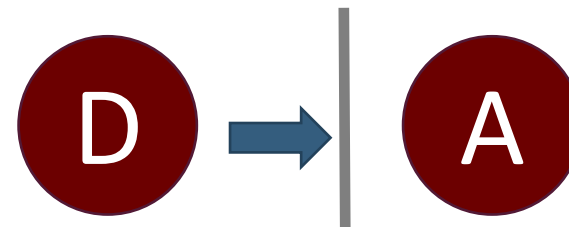
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Dezecache et  
al., 2013

---

Ironically, Narcissists are  
less prone to “catch”  
others’ emotions



Czarna et al,  
2014

TIP:

Don't hire them.

Don't tolerate them.

Try not to be one.



**Cooperation**

=



Attitudes and beliefs  
about our team

“Cooperative” attitudes such as collective efficacy,  
trust, respect, psychological safety, and cohesion

## Findings re: **Collective Efficacy**

- **Collective Efficacy** is the belief that **our team** will be successful
- Collective Efficacy **predicts** team performance
  - Meta-analysis of 67 prior studies (Gully et al., 2002)
  - When **interdependence** low then self-efficacy is more important (Katz-Navon & Erez, 2005)



## Findings re: **Collective Efficacy**

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  - When **interdependence** low then self-efficacy is more important (Katz-Navon & Erez, 2005)

**Tip:** Allocate time to discuss and celebrate wins

**Tip:** Pay extra attention on this when new tasks, team members, challenges

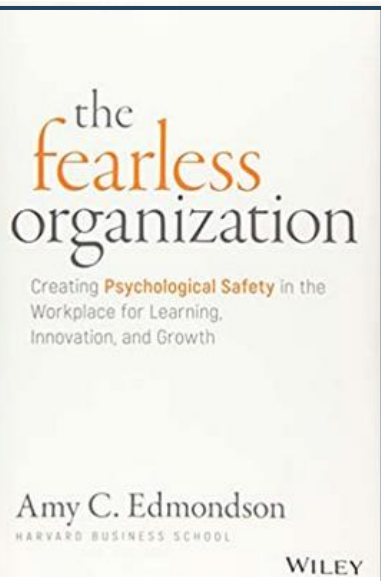


# Psychological Safety

*“A sense of confidence that the team will not embarrass, reject, or punish someone for speaking up” (Edmonson, 1999)*

Or for seeking feedback, asking questions, requesting help

No one wants to be seen as ignorant, incompetent, negative or intrusive



# Interesting Findings About Psychological Safety

## Cooperation



Meta analysis – 136 samples, over 5000 groups (Frazier et al., 2016)

- Google in-house research

Chat

What can a leader (or team member) do to boost psychological safety? To kill it?



## TIPS

### Four Tips for Creating Psychological Safety

- ✓ Admit a **mistake** or a way you can improve
- ✓ **Thank** someone for a dissenting view
- ✓ **Don't tolerate a teammate saying disparaging things** about another teammate
- ✓ Be careful about your **facial expressions** when teammates are talking

## TIPS

### Four Tips for Creating Psychological Safety

- ✓ Admit a **mistake** or a way you can improve
- ✓ **Thank** someone for a dissenting view
- ✓ **Don't tolerate a teammate saying disparaging things** about another teammate
- ✓ Be careful about your **facial expressions** when teammates are talking

No “stink eye” or lemon faces!

You can't "MAKE" your team trust one another, have collective efficacy, or feel psych safety

I read a blog post that advised readers to, "Trust like you've never trusted before." Huh?

You can't "MAKE" your team trust one another, have collective efficacy, or feel psych safety

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**When someone says to you...**

*"I want you to trust me"*

You think: *"Why should I?"*

*"Our team will succeed"*

You think: *"How do you know?"*

*"You should feel safe speaking up"*

You think: *"Because...?"*

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Cooperative attitudes EMERGE from the other 6Cs

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**Coordination** =



Behaviors

# Interesting Findings re: **Team Behaviors**

- Teamwork **behaviors** drive performance (LePine et al., 2008)

More Interdependent  
→ More Important

Type of Teamwork Processes	Examples
Transition Processes	Analysis, Reflecting, Planning
Action Processes	Monitoring, Backup, Feedback
Interpersonal Processes	Conflict management, Motivating

(Marks, Mathieu, & Zaccaro, 2005)

# Interesting Findings re: **Team Behaviors**

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(Marks, Mathieu, & Zaccaro, 2005)



# Interesting Findings Related to Conflict

Cooperation

Conflict About...	Performance
Interpersonal	↓
Process	↓
Task	<b>It depends</b>

deWit et al., 2012  
Meta-analysis of 8800 teams

# Interesting Findings Related to **Conflict**

Cooperation

Conflict About...	Performance
Interpersonal	↓
Process	↓
Task	<b>It depends</b>

deWit et al., 2012  
Meta-analysis of 8800 teams

- **Psychological safety** (Bradley et al., 2013)
- **How conflict is handled** (DeChurch et al., 2013; 3200 teams)
  - Styles: Compete – Avoid – Collaborate

# Interesting Findings Related to Conflict

Cooperation

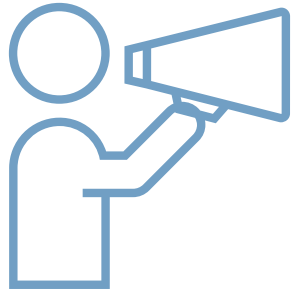
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Interpersonal	↓
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Meta-analysis of 8800 teams

- **Psychological safety** (Bradley et al., 2013)
- **How conflict is handled** (DeChurch et al., 2013; 3200 teams)
  - Styles: Compete – Avoid – Collaborate

THINK...What is the predominant conflict style in your area? What is your default conflict style?

**Tip:** Care more about *what* is right than *who* is right.



**Communication** = Information exchange

# Interesting Findings re: **Communication**

- **Info sharing** a key to team success
- Meta analysis of 150 studies – quality more important than quantity (Marlow, et al 2018)
- Meta analysis of 72 studies (Mesmer-Magnus & DeChurch, 2009)
  - Keys: Sharing of *unique* info (not just talking) and *closed loop* communications (to ensure understanding)

# Interesting Findings re: **Communication**

## Communication

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- Be aware...
  - People naturally **assume** others “know” what they know

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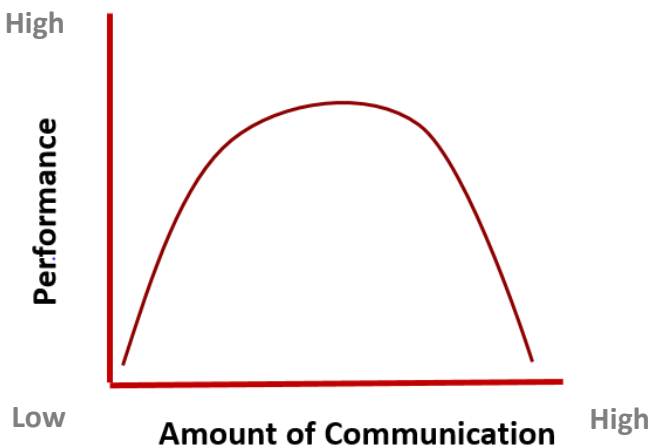
**Tip:** In hierarchical teams, must actively **encourage** speaking up

**Tip:** Get in the habit of asking, “who else should know about that?”

# Interesting Findings re: Amount of communication

## Communication

- Counterintuitive finding, high performing teams often communicate less...



“If you hear a lot of shouting, the chef is doing something wrong.”

- Successful chef



**Tip:** So the answer isn't simply to talk more, or send more messages, or meet more often.

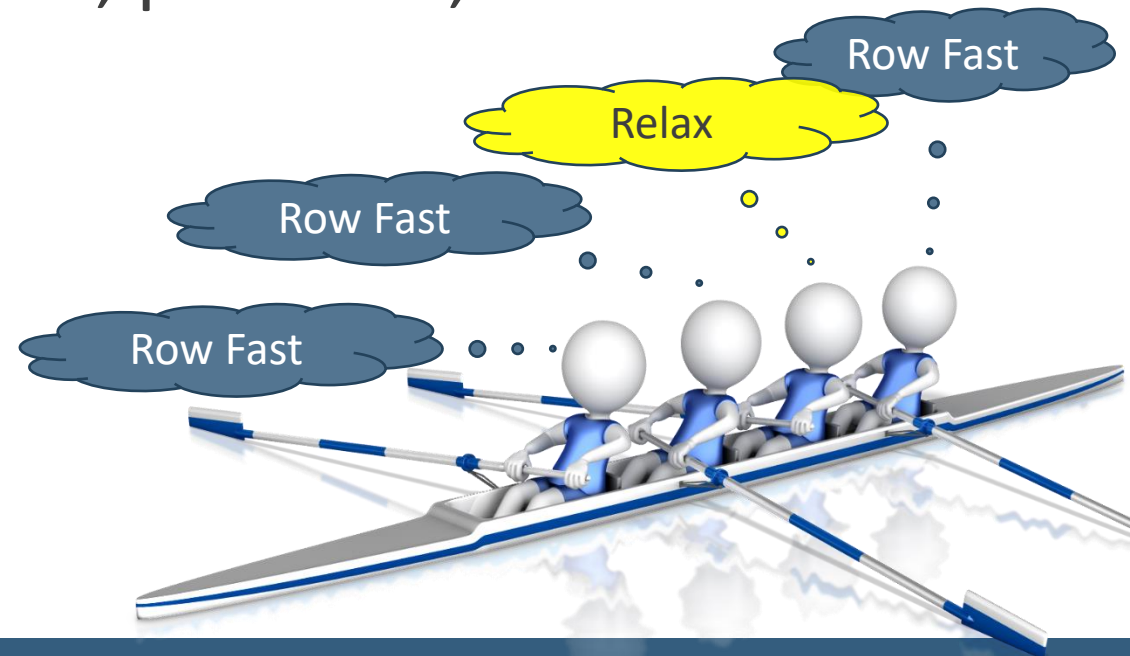




**Cognitions**      =      Shared understanding

# Interesting Findings re: **Shared MMs**

- Teams that possess a **Shared Mental Model** (SMM) perform better, particularly when coordination is required
  - Meta-analysis - 23 studies (DeChurch & Mesmer-Magnus, 2010)
- SMM about: task, if-then, vision, roles, priorities, etc.
  - Allows for “implicit coordination”
    - Quiet kitchen
    - Blind pass in basketball
    - Scalpel ready before request



# Eight Things You Need SMMs About...

## Eight Types of Shared Mental Models

Question Answered	Related to...
Where are we headed?	Vision, Purpose, Goals
What's important?	Priorities
Who should?	Roles
How to?	Tasks, Norms, Interdependencies
Why to?	Rationale
Who knows?	Expertise
What if?	Contingencies, If-then
What's up?	Situation, Cues



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Chat

Name one  
SMM that  
could be  
stronger on  
your team



# Eight Things You Need SMMs About...

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Chat

Name one SMM that could be stronger on your team



**Tip:** Unsure? Ask.



**Coaching**

=



Leadership (including  
team members)

# Interesting Findings re: **Servant Leadership**

- Some empirical support for **Servant Leadership** (Hu & Liden, 2011)
  - Increases perceived fairness, trust, organizational citizenship behaviors

You work for me



C'mon, do  
your job!

I work for you



My job is to  
remove  
barriers!

How do you want to show up?

# Interesting Findings re: **Shared Leadership**

- **Shared Leadership** is related to team performance (Hoch, Pearce, & Welzel, 2010)
  - My experience: Increasingly important to have *right person* step up to fill a leadership role at *right time* (e.g., mentoring, feedback, holding others accountable)





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Chat

Share something you've seen a team member do that is an example of shared leadership....





**Conditions**

=



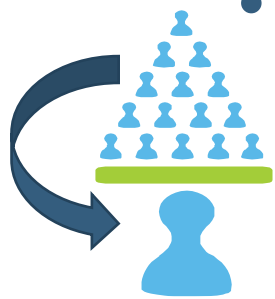
Resources, support,  
culture

# Conditions: Two Levels

- Local (my team)
  - **Resources** available (e.g., staffing, budget, equipment)
  - Amount of **autonomy/decision authority**
  - Physical **work environment**
  - **Time** availability
  - Team **design** (e.g., size, tasks, and structure)
  - **Mission/purpose**
- Broader (business unit or organizational)

# Interesting Finding: **Senior Leadership** Team

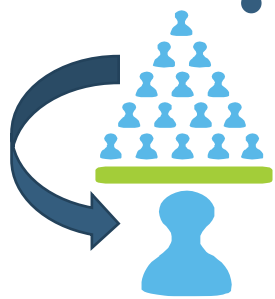
Conditions



- Teams at the top **send signals** – even if unseen! (Raes, et al., 2012)
- Study of 63 top management teams
- Leadership cooperation (helping, exchanging info, joint decision making) → employee satisfaction and retention

# Interesting Finding: Senior Leadership Team

Conditions



- Teams at the top **send signals** – even if unseen! (Raes, et al., 2012)
- Study of 63 top management teams
- Leadership cooperation (helping, exchanging info, joint decision making) → employee satisfaction and retention

Unlike Las Vegas, what happens in a senior leadership team doesn't stay there...

**TIP**

Discuss how you work together!

- Teams that do so perform 20% better (Tannenbaum & Cerasoli, 2013)

*One Simple  
but Powerful  
Tool...*

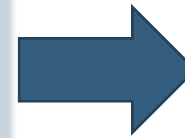


The best teams are rarely great on day one. They become great by learning and adjusting.

# Debriefs: Enable Adjustments, Build Teamwork, Drive Performance



Constructive  
team discussions



Driver
1. Capability
2. Cooperation
3. Coordination
4. Communication
5. Cognition
6. Coaching
7. Conditions

When done right, **debriefing works**

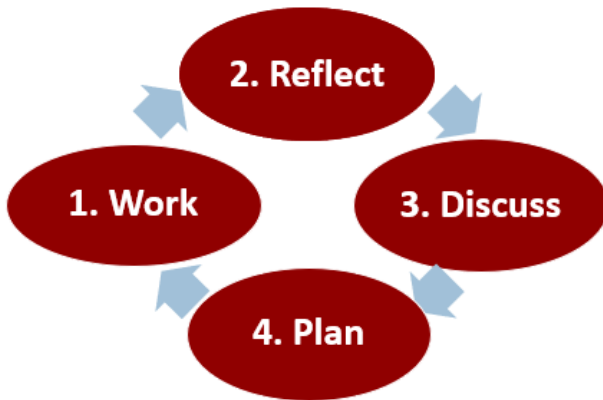
- Meta analysis – **on average 20 to 25% better!** (Tannenbaum & Cerasoli, 2013; Keiser & Arthur, 2020)
- Military study (Smith-Jentsch, Cannon-Bowers, Tannenbaum, & Salas, 2008)

# A Few Debriefing Tips...

TIP: Conduct periodic debriefs...not just after bad experiences

TIP: Discuss teamwork and not just taskwork

TIP: Leaders...ask questions before telling





# Three Take-Aways from Today

- **Teamwork matters** – not just “feel good”
  - Often won’t happen naturally – worth the effort!
- Focus on the **7 C’s** – **science of teamwork**
- Conduct periodic team **debriefs** to make adjustments

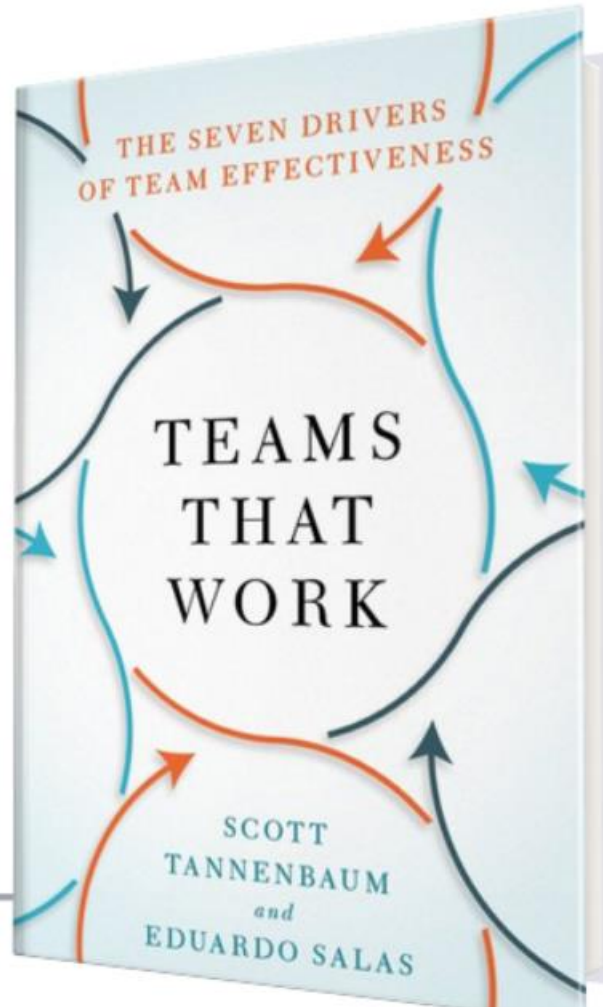


# WE WELCOME YOUR QUESTIONS!



# TEAMS THAT WORK

*The Seven Drivers of Team Effectiveness*



*Oxford University Press*

Interested in learning more about the science of teamwork?

Visit [www.teamsthatwork.com](http://www.teamsthatwork.com) to use a **free teamwork advisor**

Thanks for  
joining us!

# **Stay Tuned**

Next session: December 11, 2020 at 12pm ET

Title: Negotiating Strategies for New Roles and Responsibilities

Faculty: Dr. Zeeshan Butt