Conflict, Listening and Negotiation in the Systems Engineering Workplace

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Agenda

- Warnings and disclaimers
- Conflict is your friend
- Communication
- Negotiation
Warnings & Disclaimers
Why a Non-engineer?

• How did I get here?
  • Education- Economics- Counseling- Law school
  • Legal background
  • H/C Negotiation training- FBI Agent Terry Neist
  • Mediation training
  • Labor/management facilitation training
  • Large group mediation- Lombard Peace Center

• Technical introduction
  • Process improvement in the intelligence community
  • Using SE tools to model processes
What are Soft Skills?

• Definition- Soft skills are non-technical skills that relate to how you perform.
• Include : Human interaction, problem solving, work management
• Usually defy quantification/measurement
• Introduced through a combination of training and education
• Technical disciplines tend to avoid these in their education curricula
Importance of soft (professional) skills

• INCOSE Competency Framework
• INCOSE Model-based Competency Matrix

Soft skills—which are needed to effectively communicate, problem solve, collaborate and organize—are becoming more important for success as the workplace evolves socially and technologically.” SHRM

“Talent developers say that training for soft skills is their key focus for 2018. In the age of automation, adaptability rules. While maintaining technical fluency will be important, demand for soft skills will continue to accelerate. Industry experts and organizational partners agree that this should be the top focus for talent development in 2018.” Linked-In 2018 Workplace Learning Report
Caution: Applicability

Engineer

Teacher

Physician

Lawyer

Scientist
Think in principles, NOT in applications
Conflict is Your Friend!
What is Conflict?

“... an expressed struggle between at least two interdependent parties who perceive incompatible goals, scarce resources, and interference from others in achieving their goals.” Wilmot, W and Hocker, J, *Interpersonal Conflict*
Unpack the definition

“... an expressed struggle between at least two interdependent parties who perceive incompatible goals, scarce resources, and interference from others in achieving their goals.” Wilmot, W and Hocker, J, *Interpersonal Conflict*

Keywords:
- Struggle
- At least two
- Interdependent
- Perceive
- Incompatible goals
- Scarce resources
- Interference from others
The role of conflict in a healthy organization

- Innovation means change and change means conflict
- Thomas Kuhn, *The Structure of Scientific Revolutions* (1962)
Kuhn’s view - “Normal” science

“Normal” Science

Hypothesis 1.0 Question Test

Hypothesis 2.0 Question Test

Truth
Kuhn’s view

The container for this hypothesis/test progression Kuhn calls a “paradigm”

The paradigm defines the methods and rules for testing hypotheses as well as the allowable challenges
Kuhn’s view - Paradigm shift

Paradigm 1

Paradigm 2

Hypothesis Question Test

Incommensurability

Change not only in content but in the container (paradigm)
Kuhn’s view

Hypothesis Question Test

Paradigm 1

Incommensurability

Paradigm 2

Hypothesis Question Test

Conflict!
Historical Example - Copernicus

Paradigm 1 Ptolemy

Paradigm 2 Copernicus

Hypothesis Question Test

Incommensurability

Conflict!

“This fool wants to turn the whole art of astronomy upside down.”
“That doesn’t happen anymore” – Current examples

- Machine view (complicated) v. systems view (complex)
- Climate change
- Model-based v. Document-centric systems engineering
But . . . what happens if we resolve conflict around decision points / paradigm shifts?
The questions get bigger and more strident as successive paradigms are suppressed.
What to do about conflict?
Hints and tips for healthy conflict

• Healthy conflict is about issues NOT about people
• Healthy conflict requires a safe space
  • Trust
  • Ground rules
  • Education and training
What are some conflict management techniques?
Communication

- Bi-directional
- Multi-channel
- Multi-purpose

Goal: Achieve an aligned understanding
Skill **ONE** - Listening

- Getting ourselves ready to listen
- Two ears, one mouth
- It’s not ALL about you!
Skill - Advocacy (Persuasion)

- Why persuasion is **NOT** negotiation
- We are **NOT** data driven!
- Of elephants and riders- The pillars of rhetoric
The 3 pillars

- Ethos
- Logos
- Pathos

Aristotle, 3 Pillars of Rhetoric
Addressing Emotion

Recognizing reality
Elephant and rider analogy

Example:
Change? Me?
Must make the emotional case!

Chip and Dan Heath, Switch: How to Change Things When Change Is Hard
Jonathan Haidt, The Happiness Hypothesis
Negotiation
Skill - Problem Solving

• Negotiation is **mutual**
• Negotiation is **solution**-seeking
• Interest-based problem solving
• Focus is on getting into the shoes of the other party
• Not based on rhetorical tricks or exploiting rules
Summary

• “Soft” skills are applicable wherever there are humans involved
• There is a growing consensus around the importance of soft skills
• Conflict is important to the healthy organization as an innovation driver
• Conflict should be managed NOT resolved
• Communication is the backbone of conflict management skills
• Listening is the number one communication skill
• Pathos (emotion) is the forgotten pillar of advocacy
• Negotiation is about understanding NOT tricks for arguing
• Join us on the 25th for tips, tricks and techniques
Resources

• Paradigm Shift / Change
  • Kuhn, Thomas, *The Structure of Scientific Revolutions*
  • Parsons, Keith, *It Started With Copernicus*

• Negotiation/Change
  • Heath, C., and Heath, D., *Switch: How to Change Things When Change Is Hard*

• Interest Based Problem Solving
  • Fisher, R., Ury, Wm., *Getting To Yes*
  • Collaborative Interest Based Problem Solving ([https://bit.ly/3B5j0nu](https://bit.ly/3B5j0nu))

• Videos
  • Russell Ackoff, From Mechanistic to Systemic Thinking ([https://www.youtube.com/watch?v=yGN5DBpW93g](https://www.youtube.com/watch?v=yGN5DBpW93g))
Thank You!

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