CS 307: Software Engineering

Lecture 13: Peopleware

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Announcements

- Team reports
- Thursday’s lecture
- Exam review Thursday, October 12
- Exam Tuesday, October 17 in class
Lecture 13

- Conflict
- Unmet needs
- Teams
- Dinosaur brains
- Management
Mild conflict

Analytics
Slow Task

Drivers
Fast Task

Amiables
Slow People

Expressives
Fast People
Serious conflict

Analytics
Slow Task

Drivers
Fast Task

Amiables
Slow People

Expressives
Fast People
Versatility

- Your ability to adapt or modify your own social style or behavior patterns when interacting with other people
Dealing with People You Can’t Stand
– Brinkman and Kirschner
Driver - Intent

“Get it done” not met

- **Tank** – rips people apart, runs over people
- **Sniper** – uses embarrassment and humiliation
- **Know it All** – uses domination, finding faults, disallows opposing views
Task Focus

Normal
Not Met

Driver

Aggressive

Expressive

People Focus

Get it Right

Analytic
No Person

Perfectionist

Nothing Person Passive

Whiner
Analytics - Intent

“Get it right” not met

- **Whiner** – constant complaints, sense of helplessness, nothing is going right
- **No person** – it won’t work, sense of hopelessness
- **Nothing person** – fine! Do it your way. I have nothing to say on the matter
Amiables - Intent
“Get along” not met

- **Yes person** – whatever you say is fine with me
- **Maybe person** – afraid to make a wrong decision. Therefore puts off making any decisions
- **Nothing person** – shy, timid, uncomfortable, and uncertain. Best to say nothing at all
Expressives - Intent
“Get appreciated” not met

- **Grenade** – the adult temper tantrum
- **Friendly sniper** – sniping is a fun way to gain attention
- **Think they know it all** – use exaggeration, half truths, useless advice to help again attention
Tips

- Some helpful suggestions from DeMarco and Lister’s book *Peopleware: Productive Projects and Teams*
There are a million ways to lose a work day, but not even a single way to get one back.
Team formation environment

1. Make a cult of quality
2. Provide lots of satisfying closure
3. Build a sense of eliteness
4. Allow and encourage heterogeneity
5. Preserve and protect successful teams
6. Provide strategic but not tactical direction
Teamicide environment

1. Defensive management
2. Bureaucracy
3. Physical separation
4. Fragmentation of people’s time
5. Quality reduction of the product
6. Phony deadlines
7. Clique control
8. Those damn posters and plaques
9. Overtime
Dinosaur Brains

“The Dinosaur Brain is our source of instructions for handling instincts and emotions as old as the dinosaurs: aggression and anger, mating and sexual attraction, territoriality and fear, social hierarchy and loyalty.”

– Bernstein and Rozen
When the Dinosaur Brain gets in the way of rational, organized, businesslike thinking, the result can be trying to reason with a lizard.

– Bernstein and Rozen
Lizard Logic Rules

1. Get It Now! Impulsiveness

- Reptiles can’t wait
- Immediate time frame
- Short term thinking
- Highly emotional
2. Fight, Run, or Freeze
They respond to threats or aggression by

- Fighting back
- Running away
- Becoming unable to think or function
3. Be Dominant! Hierarchies, Dominance, and Power Struggles

- They love social hierarchies
- They want to be top dinosaur
- They tend to be aggressive with unbridled competitiveness
4. Defend the Territory! Power and Empire-building

- Dinosaurs seek, acquire, guard, and defend their turf
- It can be a cultural issue
5. Get the Mate! Office Romances

- When lizards see an attractive member of the opposite sex, they immediately behave in courtship patterns instead of paying attention to business
6. If It Hurts, Hiss! Complaining and Placing Blame

- Dinosaurs believe that they are never the source of their troubles. Therefore, when something goes wrong they:
  - Complain
  - Blame
7. Like me Good; Not Like Me, Bad

- Dinosaurs always divide the world into good and evil
Management ideas from the book

The Art of Managing People
Hunsaker and Alessandra
1. Learn the art of questioning
2. Learn how to become an active listener
3. Learn how to project the appropriate image
4. Learn how to communicate effectively through voice tones
5. Learn how to read and use body language effectively
6. Be aware that spatial arrangements are important
7. Learn how to use your time effectively
8. Learn how to use feedback effectively
Out at Five

“The average person is only mentally productive a few hours a day no matter how many hours are worked. To get the best work out of your employees, make sure they leave work by five o’clock”

– Scott Adams
Some wisdom from Tom DeMarco’s *The Deadline*

- Four essentials of good management
  1. Get the right people
  2. Match them to the right jobs
  3. Keep them motivated
  4. Help their teams to jell and stay jelled

*(the rest is administrivia)*
Safety and change

- People can’t embrace change unless they feel safe
- Change is essential to all success in project work
- A lack of safety makes people risk averse
- Avoiding risk is fatal, since it causes you to miss out on the associated benefit as well
Manager’s essential body parts

- Management involves heart, gut, soul, and nose
  - Lead with the heart
  - Trust your gut (trust your hunches)
  - Build soul into the organization
  - Develop a nose for bullshit
The Fine Art of Baloney Detection

- Dr. Carl Sagan
1. Wherever possible there must be independent confirmation of the “facts.”

2. Encourage substantive debate on the evidence by knowledgeable proponents of all points of view.

3. Arguments from authority carry little weight — “authorities” have made mistakes in the past. They will do so again in the future. Perhaps a better way to say it is that in science there are no authorities; at most, there are experts.
4. Spin more than one hypothesis. If there’s something to be explained, think of all the different ways in which it could be explained. Then think of tests by which you might systematically disprove each of the alternatives. What survives, the hypothesis that resists disproof in this Darwinian selection among “multiple working hypotheses,” has a much better chance of being the right answer than if you had simply run with the first idea that caught your fancy.
5. Try not to get overly attached to a hypothesis just because it’s yours. It’s only a way station in the pursuit of knowledge. Ask yourself why you like the idea. Compare it fairly with the alternatives. See if you can find reasons for rejecting it. If you don’t, others will.
6. Quantify. If whatever it is you’re explaining has some measure, some numerical quantity attached to it, you’ll be much better able to discriminate among competing hypotheses. What is vague and qualitative is open to many explanations. Of course there are truths to be sought in the many qualitative issues we are obliged to confront, but finding them is more challenging.
7. If there’s a chain of argument, every link in the chain must work (including the premise) — not just most of them.

8. Occam’s Razor. This convenient rule-of-thumb urges us when faced with two hypotheses that explain the data equally well to choose the simpler.
Always ask whether the hypothesis can be, at least in principle, falsified. Propositions that are untestable, unfalsifiable are not worth much. Consider the grand idea that our Universe and everything in it is just an elementary particle — an electron, say — in a much bigger Cosmos. But if we can never acquire information from outside our Universe, is not the idea incapable of disproof? You must be able to check assertions out. Inveterate skeptics must be given the chance to follow your reasoning, to duplicate your experiments and see if they get the same result.
Playing defense

1. Cut your losses
2. You can improve overall performance more by containing your failures than by optimizing your successes
3. Be aggressive about canceling failed efforts early
   - Sunk cost fallacy
4. Think of a jelled team – ready and willing to take on a new effort – as one of the project deliverables.

5. A day lost at the beginning of a project hurts just as much as a day lost at the end.
Process and process improvement

1. Good process and continually improving process are admirable goals.
2. They are also very natural goals: good technical workers will focus on them whether you tell them to or not.
3. A project can hope to gain enough from a single well-chosen method improvement to repay the time and money invested in the change.
Effects of pressure

1. People under pressure don’t think any faster
2. Extended overtime is a productivity reduction tactic
3. Short bursts of pressure and even overtime may be a useful tactic as they focus people and increase the sense that the work is important
   - Extended pressure is always a mistake
Conflict

- Building and installing systems is particularly conflict prone
- Conflict deserves respect. Conflict is not a sign of unprofessional behavior
- Remember: everyone is on the same side; the problem is on the other side
Questions?