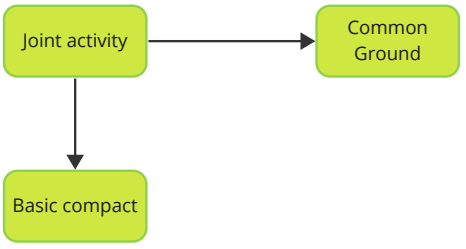
- **Introduction**
  - Code of Conduct
  - Communication -- Miro and Zoom Chat
  - Andrea Magnorsky: creator of https://bytesizearchitecturesessions.com/ ; principal engineer and now software and architecture consultant in London -
  - Contact on Mastodon: https://types.pl/@roundcrisis on LinkedIn: https://uk.linkedin.com/in/magnorsky
- **Discussion led by Andrea Magnorsky**
  - The paper is available at:
  - https://www.researchgate.net/publication/227992178_Common_Ground_and_Coordination_in_Joint_Activity
  - or https://jeffreymbradshaw.net/publications/Common_Ground_Single.pdf
    (Lesson 1 for joint co-ordination: all use the same copy, for common page numbers haha)
- **Wrap**
  - Thank you Andrea!
  - Continuing the discussion: discord
  - Next paper: August 7, "Dead rats, dopamine, performance metrics, and peacock tails: proxy failure is an inherent risk in goal-oriented systems" by Yohan John et al. Discussion will be led by Juno Suarez. More info/sign up (free): https://ti.to/bredemeyer/ps-proxy-fail
  - Follow #PapersInSystems on mastodon

6 main sections, 8 minutes per section

Definitions



Perhaps the most important basis for interpredictability is common ground (Clark & Brennan, 1991), which refers to the *pertinent* mutual knowledge, mutual beliefs, and mutual assumptions that support interdependent actions in some joint activity. Common ground permits people to use abbreviated forms of communication and still be reasonably confident that potentially ambiguous messages and signals will be understood. Short of being able to rely on common ground to interpret such

We propose that joint activity requires a "Basic Compact" that constitutes a level of commitment for all parties to support the process of coordination. The Basic Compact is an agreement (usually tacit) to participate in the joint activity and to carry out the required coordination responsibilities. Members of a relay team enter into a Basic Compact by virtue of their being on the team; people who are angrily arguing with each other are committed to a Basic Compact as long as they want the argument to continue.

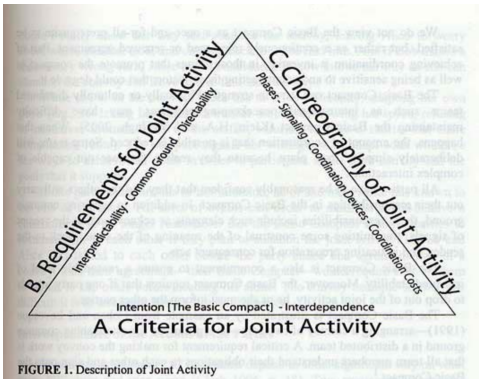
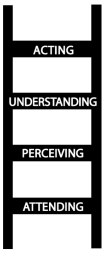
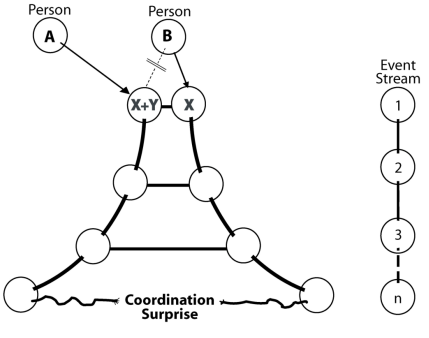


FIGURE 1. Description of Joint Activity



Joint Action Ladder.



e 3. Fundamental Common Ground Breakdown.

What do you do differently having read this paper? - Yvonne

Tuckman team model https://www.wcupa.edu/coral/tuckmanStagesGroupDelvelopment.aspx

CIA Sabotage manual

https://www.openculture.com/2022/01/read-the-cias-simple-sabotage-field-manual.html

Re signals https://www.poetryfoundation.org/poems/58264/a-ritual-to-read-to-each-other

Boundary objects

Boundary Objects and Beyond
Massachusetts Institute of Technology
https://mitpress.mit.edu › boundary-objects-and-beyond

The multifaceted work of the late Susan Leigh Star is explored *through a selection of her writings and essays by* friends and colleagues. Susan Leigh Star ...

Maybe too far afield, but common ground as seen from philosophy of language:

http://williamstarr.net/teaching/speech_acts/Stalnaker-2002-Common_Ground.pdf

SIGNAL: Don't ask forgiveness, radiate intent
https://medium.com/@ElizAyer/dont-ask-forgiveness-radiate-intent-d36fd22393a3

Elizabeth Ayer

A couple of meaty books from one of the authors of the joint activity book (DDWoods)

Cognitive Systems Engineering book

Joint Cognitive Systems book

David Edgerton's book The Shock of the Old is great about technological transition states.

Re boundary objects, I love this paper: https://depts.washington.edu/csclab/wordpress/wp-content/uploads/Lee-2007.pdf

Automation as a team player:

https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=1363742

From the Discord: Maturana: Shared by Hibri Our topic is the ideas of Humberto Maturana, who died at the age of 92 late in 2021. A set of videos of him being interviewed by Ray Ison are available on OpenLearn here - https://www.open.edu/openlearn/money-management/management/leadership-and-management/managing/systems-explained-humberto-maturana

Videos 1 - 4 are short videos focused on defining system
Videos 5 – 9 are focused on cognition and epistemology
Videos 10 – 12 are around conversation, dynamics of relationship and change
Videos 13 and 14 are set against the bigger pictures of totalitarianism and love, brilliantly exemplified through reference to 1980s TV action hero, MacGyver.

Psychological safety and power

Talk on responsible risk and resilience https://www.youtube.com/watch?v=1XrkuqUyQU8


What do you do differently?
Common ground
repair common ground
takes time and effort over time
Basic compact
Aligning the goals
Common ground is a process
A process - not just a common goal
Relaxing individual goals to enable collaboration
context
Coordination requires interpredictability
managing dependencies, alignment and tradeoffs between activites
Coordination at different TimeScales
Dance vs Sending Emails
Terminology common ground understanding of definitions - e.g. Ubiquitous language in Domain Driven Design
Common Ground as a *process* as opposed to a static thing
Would software development be considered a "joint activity"?
And the idea that repair of the common ground is an ongoing activity
Shared visualization doesn't create common ground - requires attention shift to perceive specific change
Common ground expand over time?
common ground needs to be continiously repaired

what to do when everyone have their own agendas

reduce plans complexity when not capable of maintaining baisc compact levels

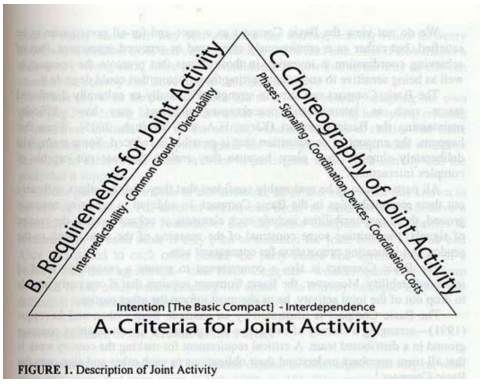


FIGURE 1. Description of Joint Activity

Would software development be considered a "joint activity"?

Common ground

Support common ground:
1) Structuring the preparations in order to establish initial calibration of content, and to establish routines for use during execution.
2) Sustaining common ground by inserting various clarifications and reminders, whether just to be sure of something or to give team members a chance to challenge assumptions.
3) Updating others about changes that occurred outside their view or when they were otherwise engaged.
4) Monitoring the other team members to gauge whether common ground is being seriously compromised and is breaking
down.
5) Detecting anomalies signaling a potential loss of common ground.
6) Repairing the loss of common ground.

Consensus around Intention

common ground and how to update it in software development

Reducing room for misinterpretation

game theory references?

Boundary objects that helps the coordination

importance of diversity of perspective highlighted

Re boundary objects, I love this paper: https://depts.washington.edu/csclab/wordpress/wp-content/uploads/Lee-2007.pdf

Timing of signals

Importance of being predictable

Making sure we're going up the joint action ladder

signaling

Signaling only works if the other participants notice the signals

Checklist as coordination device - Pilots example

timing of signaling, if wrong , can be very damaging

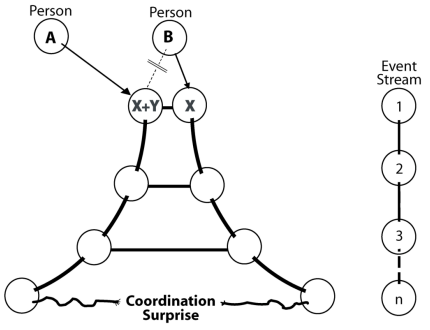
It's been interesting to watch the way Tesla FSD signals what it's doing to other drivers, (creeping forward) as it becomes a better human simulator

Capture the disagreement

we don't need to agree , we need to agree on how we disagree

Focus on "capture the disagreement"

How avoid the coordination surprise



e 3. Fundamental Common Ground Breakdown.

we are supposed to continunosly fix the common ground

Dedicate a section of document to clarifying assumptions

how to address this: Bruno mentions trying to get better at surfacing assumptions

We make assumptions just to operate in the world

No mention in the doc about psychological safety or power relationships

Inter predictability

What about HIPPOs

Psychological safety?

In documents, surface assumptions

Create rapport with stakeholders

This paper seems to assume good intent by the actors in most of it's discussion

https://yaleobooks.yale.edu/book/9780300078152/seeing-state/

conceptualise complex systems as agents?

Observability

The paper helped to me to finally establish have a structure to overlap, share and improve collaboration + communication between my technical and sales focused team members. We joke and call it our Rosetta Stone.

I felt that idea acutely working on a team that spanned 8 timezones

one of my questions is always “why are we doing this?” When people find it annoying, I point out that if they know, they it should be a quick answer...

what you’re saying about standards indirectly reminds me of my favorite cognitive bias: https://en.wikipedia.org/wiki/Abilene_paradox

https://twitter.com/jessifer/status/1229193366929317889
^ re speed, standards, and decision-making

I remember a case of the Abeline paradox at Sun where teams were moving from assigned offices to hoteling, and each group was given the choice and they all didn’t want to and all ended up doing it because everyone else was doing it.

It really is the best paradox because once I knew about it, I could start asking “ok, so are we doing this for a reason, or are we doing it because we think someone else wants us to do it? Who is that person? Can we go talk to them?”

Ten Challenges for Making
Automation a “Team Player”
in Joint Human-Agent Activity

https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=1363742

I think my point was a bit different, and is some kind of game theory. If some members of a group want the group to succeed, but others want it to fail, but without being blamed for the failure, then by adding too many people to the group and growing the scope, the outcome is that it never reaches agreement.

I'm pretty sure almost that exact technique is in the CIA simple sabotage manual

^ added a link in the "related work" frame

re your comments, I think there is an epistemological question in both of them, about “how do we know that?” We need the artifacts, and the artifacts need to be remade as knowledge changes *and* our knowledge needs change.

When possible, refer all matters to committees, for "further study and consideration." Attempt to make the committee as large as possible — never less than five."

Re boundary objects, I love this paper: https://depts.washington.edu/csclab/wordpress/wp-content/uploads/Lee-2007.pdf

we need more and different rituals/reccuring processes to upkeep mental models ...

I run a monthly "risk matrix" review where a team keeps their biggest risks on a board and talks about them and reviews them every month... after 3 months, it takes 15 minutes and we end up treating it as a celebration of removing items. when a new developer comes on, we do a longer one to download all the "gotchas" ... one sr dev commented afterwards "wow! you just showed me 6 months of making mistakes and finding monsters in an hour!"

Meta comment - thanks for this Miro based structuring of the group activity, it looks like a useful technique. I'm still figuring out how best to use Miro and learning from seeing many ways to use it, beyond the old in person whiteboards and stickies methods, which partially translate to online...

I loved the example of moving from email to a synch convo - I call this escalation

Re signals: https://www.poetryfoundation.org/poems/58264/a-ritual-to-read-to-each-other

Explicitly establishing and having a conversation about common-ground counters "confirmation bias" - people's tendency to process information by looking for, or interpreting, information that is consistent with existing beliefs. This biased approach to decision making is largely unintentional, and it results in a person ignoring information that is inconsistent with their beliefs. These beliefs can include a person's expectations in a given situation and their "predictions" about a particular outcome. People are especially likely to process information to support their own beliefs when an issue is highly important or self-relevant.

https://www.britannica.com/science/confirmation-bias

I like that, focus on "capture the disagreement"

-- if you are familiar w/ eventstorming, miro+zoom breakout groups enables eventstorming to scale far, far beyond the whiteboard ... turns out the meeting room was the constraining resource.

In a large org, having data engineers, support engineers, call center, field workers, etc. --- the stakeholders who are usually forgotten -- give their input and build common ground is invaluable. And at scale, its not expensive but highlights common ground gaps amazingly well.

https://miro.com/miroverse/event-storming/

Code of Conduct

Our participation here reflects our mutual agreement and commitment to each other to follow this code of conduct during our discussion today. It applies equally to all of us (including facilitators).

- We share a commitment to providing a friendly, safe and welcoming meeting experience for all, regardless of level of experience, gender identity and expression, sexual orientation, disability, personal appearance, body size, race, ethnicity, age, religion, nationality, or other similar characteristic.
- Please be kind and courteous. Please avoid using terms that might detract from a friendly, safe and welcoming environment for all.
- Respect that people have differences of opinion and that our discussions will reflect different perspectives, trade-offs and impacts. There is seldom a right answer.
- Should anyone insult, demean or harass others in this setting, they will be excluded from interaction (contact the facilitators, if this happens). That is not welcome behavior.
- Likewise any spamming, trolling, flaming, baiting or other attention-stealing behavior is not welcome.

Note: We have adapted this code of conduct from the Ruby Code of Conduct.