



Reconceptualizing synergy:

If the whole is more than the sum of its parts,
timing may account for the difference.

Amit Gal

Open university, Israel

Context & motivation

- A motivating phenomenon: "catalysts" - people who contribute to team outcomes indirectly, by making other members better
 - rowing teams (de Rond, 2008)
 - Shane Battier (NBA) (NY Times, 15/2/2009)
 - the "paradox of the second violin" (Murnighan & Conlon, 1991)
 - personal experience (as software team leader)
- Gain better understanding of individual contributions to teams
 - Group research typically focuses on group level constructs (e.g. processes, composition) to explain group performance (with the exception of leadership)
 - Recent developments (e.g. Grant & Patil, 2012 concept of minority influence) challenge this approach, and call for a more nuanced appreciation of the contribution of individuals to teams
 - Practical need: reward individuals, while outcomes are at the group level.

Conceptual “strategy”

- Revive the notion of “process gains” or “synergy”
- But focus on actions/interactions as a unit of analysis, studying their properties and effects on team performance.

Benefits:

- Avoids abstract, aggregated accounts of process
- Accounts for how work gets actually done (Barley & Kunda, 2001)
- Enables investigating who does what
- Enables investigating the dynamics of actions (Cronin, Weingart & Todorova, 2011)

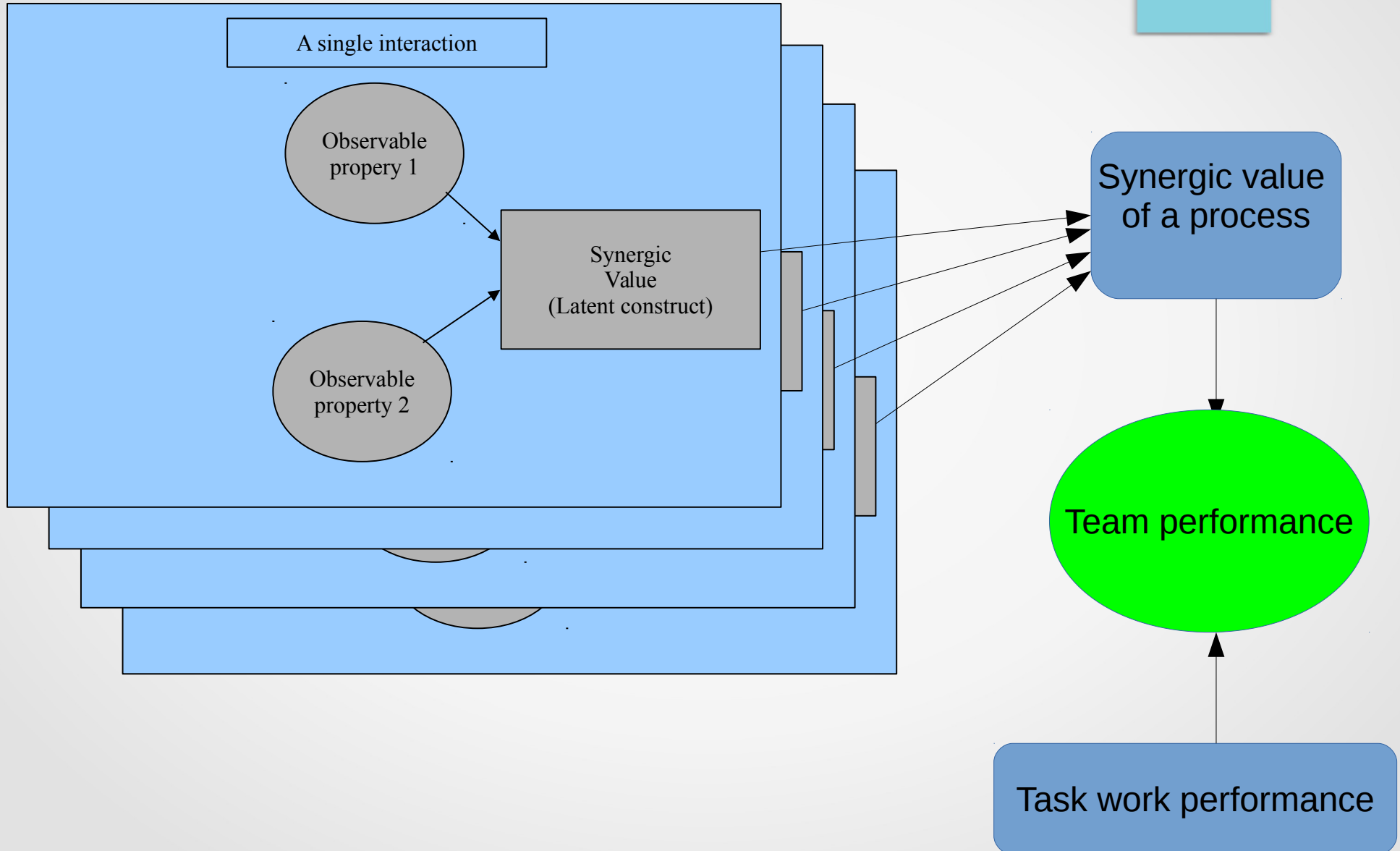
What is (was) synergy?

- While the term synergy is common in popular team literature, it hasn't been studied a lot.
- 2 streams of research, both grew out of fashion:
 - Hackman's notion of process gains:
 - Synergy as a moderator in the IPO framework
 - But remains vague about what is it, and sometimes depict synergy as the process itself.
 - Comparing performance of interacting teams to “nominal teams”
 - An attempt to isolate and quantify the net effect of process.
 - Only suitable for limited type of tasks
- Most research on team effectiveness is:
 - Comparative (“between team”), but the concept of synergy is inherently “whithin team” - e.g. comparing actual process, to “what could have been” process
 - Process is measured in broad, abstract, aggregated, after the fact, way (cannot capture complexities, nuances and dynamics)
- Synergy has been criticized of being a “circular”, after the fact description

New theoretical beginnings...

- Putting actions and interactions at the center of process:
 - “members' interdependent acts that convert inputs to outcomes through cognitive, verbal, and behavioral activities directed toward organizing taskwork to achieve collective goals. Centrally, team process involves members' interacting with other members and their task environment.” (Marks, Mathieu & Zaccaro, 2001)
- Partitions actions into “task work” and “process work”
- “process gains” (or synergy) can now be tracked by measuring the properties of actions that are part of “process work” and assess their contribution on performance (across tasks/contexts)

A diagram of process gain model:



Where did the process go?

- The “chemistry metaphor”:
 - interactions are atoms, processes are molecules
 - The “synergic value” of a process is derived from the properties of the “atoms” it is composed of.
 - But this can be extended:
 - The synergic value of a person
 - The synergic value on Mondays (vs. other times)
 - The synergic value under pressure.
 - Etc.
- As long as we have good observable properties of interactions that serve as a good proxy for the latent synergic value, the definition of “process gain” (or synergy) is not circular. It is not “after the fact” and is anchored in actual observable behaviors.
- What properties might serve as a good proxy across contexts?

Timing!

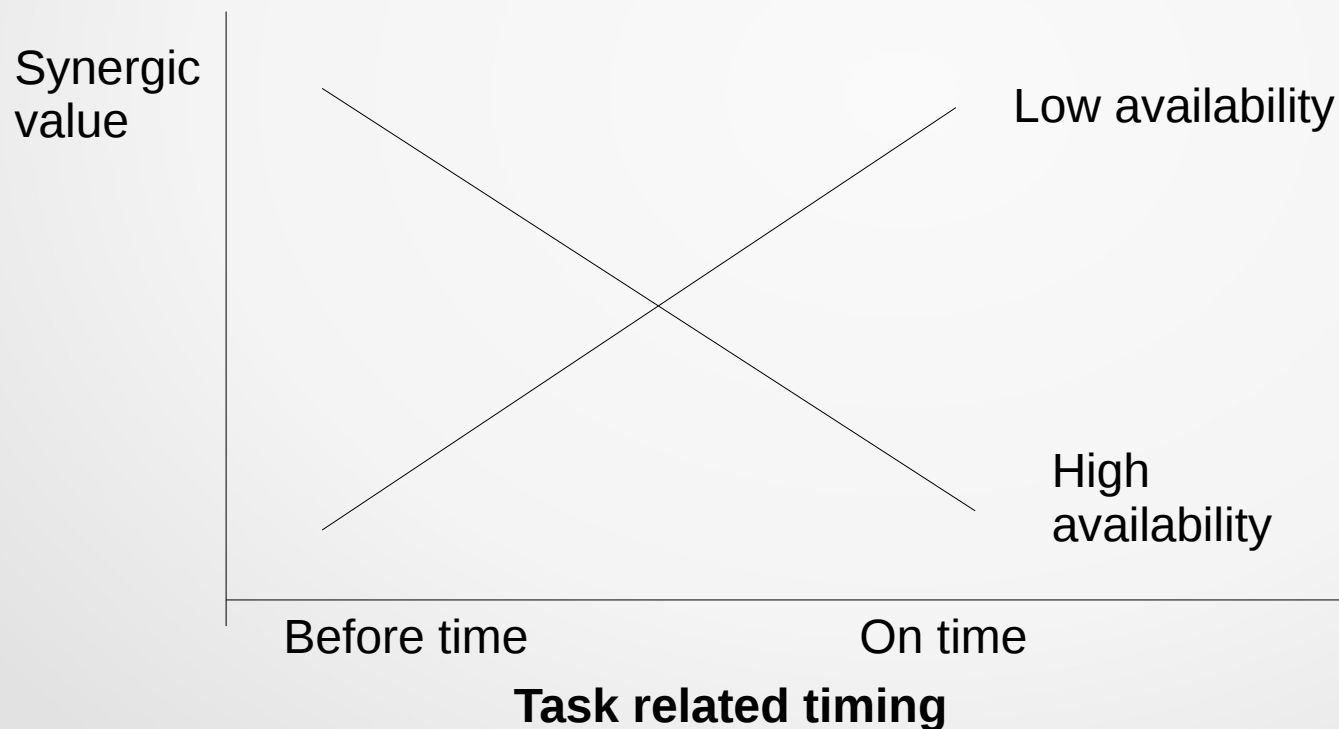
- “Timing is everything” but what is it?
 - *a socially constructed perception of fit between the time at which an action is performed and an imaginary time in which it (or a similar action) should have been or is expected to be performed*
 - *Not necessarily related to actual times, but rather tied to expectations, anticipations and affordances due to task structure, relational aspects of team members, etc. (but sometimes is tied to a specific time)*
 - *Two aspects of timing:*
 - *Task related timing:*
 - *Due to task structure, actions and resource interdependencies*
 - *Cognitive availability:*
 - *Team member's ability to interpret and process the content of an interaction at a given moment in time.*

Timing as a source of synergy (I)

- Proposition 1: There is an inverted-U relationship between cognitive availability and synergic value:
 - Low cognitive availability is bad
 - incoming information is likely to be misinterpreted or ignored
 - High cognitive availability is bad
 - From a psychological perspective it means disengagement.
 - From an informational perspective it means new information cannot be readily integrated with existing information
 - Medium cognitive availability is good
 - Recipient is engaged with the task, working memory has relevant information, but has room for new information

Timing as a source of synergy (II)

- Proposition 2: task related lateness is bad
- Proposition 3: joint effect of task related timing and cognitive availability



Summary

- Moving to the action level and its properties enables capturing “net process gains” (e.g. synergy)
- The synergic value of an action is latent (e.g. cannot be measured directly), but can be assessed based on actions' properties
- I proposed that timing of an actions is a strong determinant of its synergic value, and outlined how different aspects of timing affect it.
- Important – while I believe this theory, it needs to be assessed empirically
- However, if it turns out to be true, we should use more methods such as experience sampling to capture properties of specific actions.
- Using such methods, we can assess who is helping the team indirectly, and study in more depth the dynamic aspects of group processes.

Questions

- From me to you:
Does this make any sense?
- I'd be happy to answer/discuss any questions you may have
- This presentation is available for download from:
www.galamit.com/presentations.html

THANK YOU!