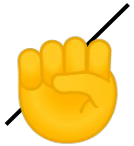
2019 ©

SUMMER 2019
Stanford HCI

TONYA NGUYEN



SCALED

HUMANITY

TASK DESIGN
Person vs. Situation

HCI Lunch • 21 August 2019 • ~12pm

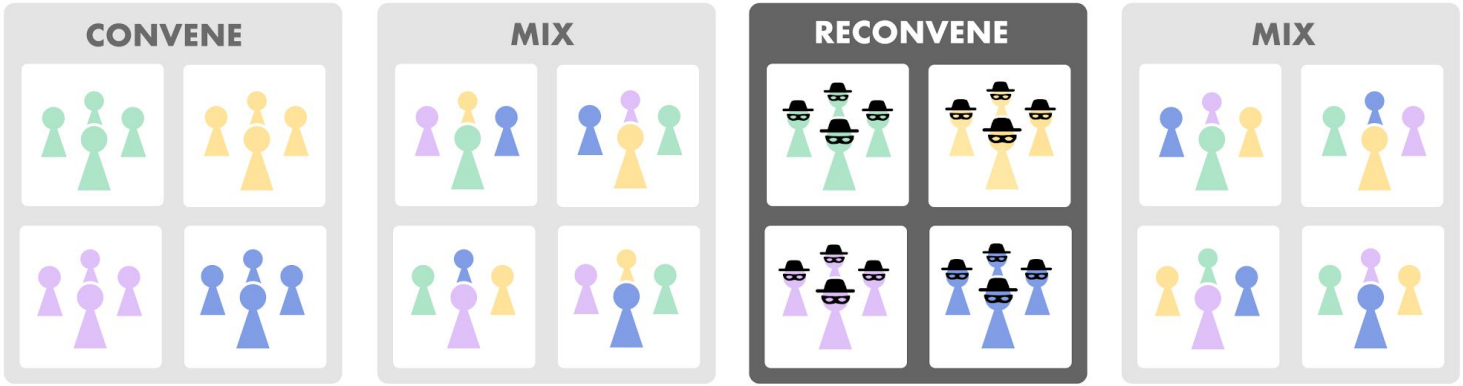
Tonya Nguyen

- Mentored by 💥 **Mark Whiting**
- Rising senior at 🐻💛 **UC Berkeley**
- Studying 🤖 **HCI** & 📗 **Critical Theory**

FRACTURE

When more than half of the teammates **no longer want to work together**; loss of team viability

MASKED



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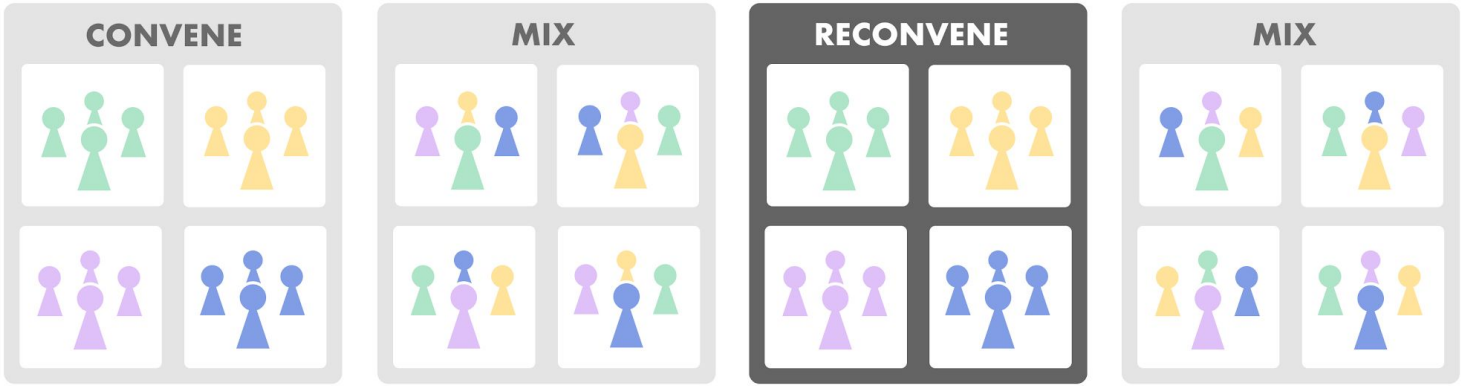
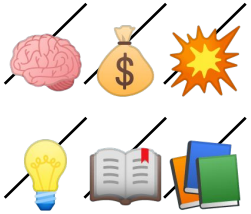


Motivation

Task stimuli manipulate if 💔 **fracture** is more explained by 👨 **personal** or ⏳🔮 **situational factors**

Did It Have To End That Way?: Masking Repeated Interactions to Test the Consistency of Collaborative Outcomes
WHITING ET AL., 2019



Cognitive Conflict

Intellective Tasks

→

🔎📏Teams tend to consistently repeat their preference for fracture due to their **personal nature**

Creative Tasks

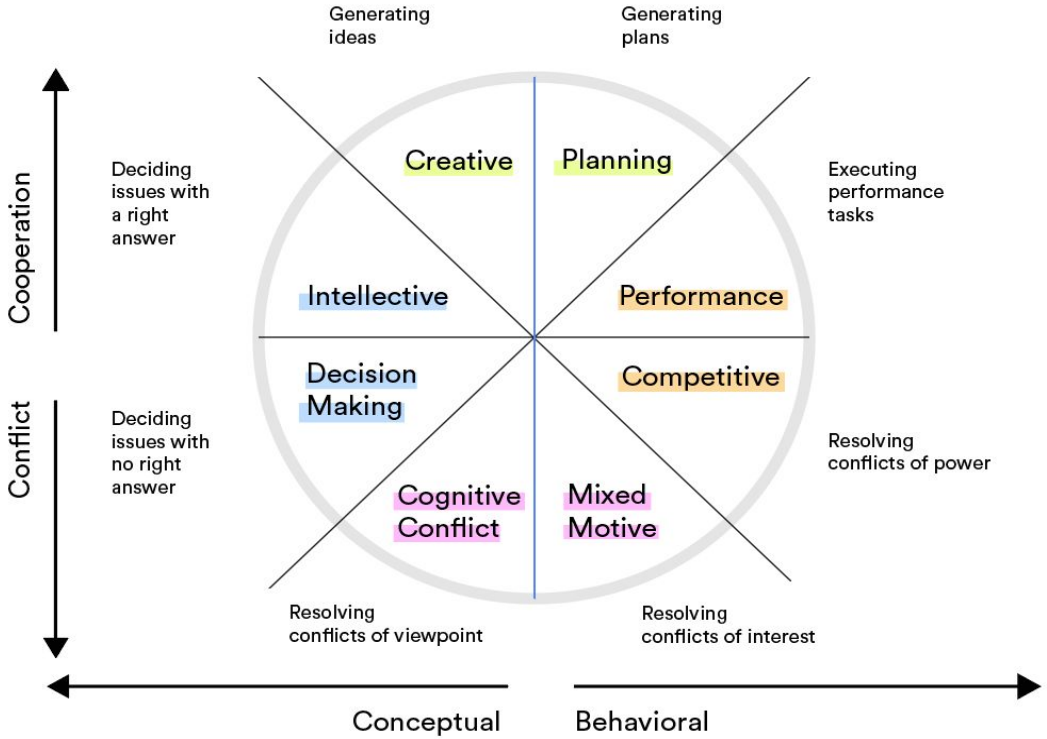
→

📊👀 Teams tend to be **inconsistent, situational**

Research Question

What 👀👃👄 **properties of** ✔️ **tasks** contribute to this ➖ **difference?**

How should we understand tasks?



What properties are there?

Circumplex Type	Task Goal	Decision Making Process	Dominant Process	Interdependence	Task Design
Decision Making	Convergence on a shared outcome	Voting, unanimous	Conflict Resolution	High	
Creative	Diverge on ideas, converge on one	Consensus, unanimous	Execution	Moderate	
Cognitive Conflict	Converge on a joint outcome based on personal views	Unanimous	Conflict Resolution	High	
Intellective	Converge by agreeing on one truth	Truth wins, majority vote	Problem Solving	Low	

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What tasks fit into the circumplex?

Decision-Making

Jury Decisions

Creative

Ad Writing (Dow, Salehi)

Cognitive Conflict

Splitting based on personal values

Intellective

Logic games, math problems, puzzles

What did I learn from creating tasks?

Decision-Making

Jury Decisions

Creative

Ad Writing (Dow, Salehi)

Cognitive Conflict

Splitting based on personal values

Intellective

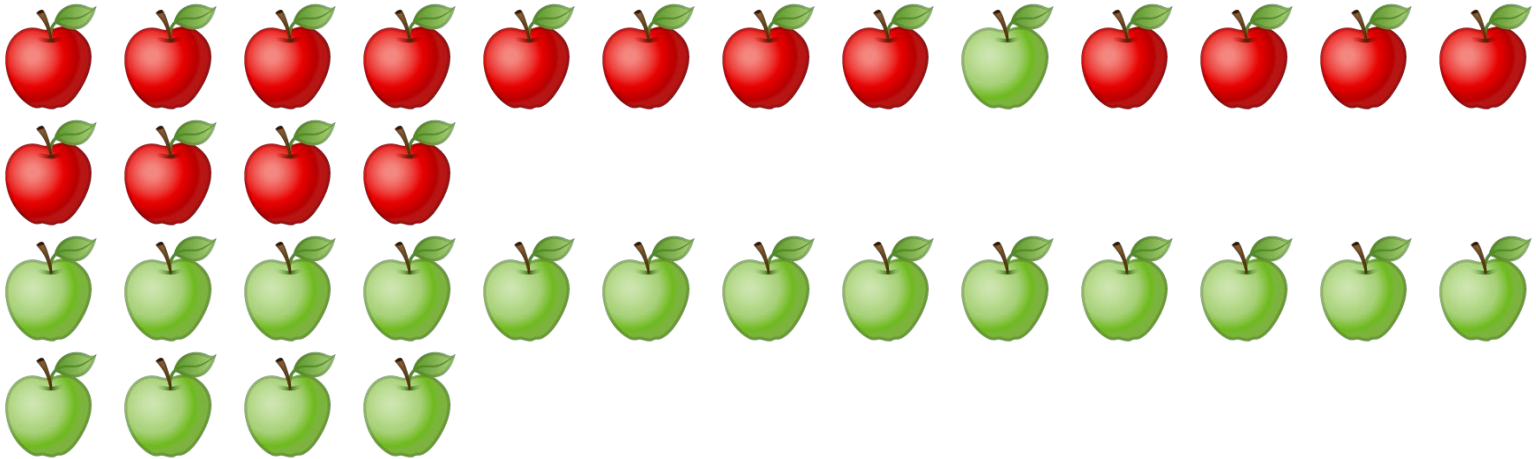
Logic games, math problems, puzzles

What did I find?

Decision Making, *Cognitive Conflict*, *Mixed Motive*

Decision making mechanisms and **personal motivation** influence group **climate**

ONE ROTTEN APPLE SPOILS THE WHOLE BARREL



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Decision Making	**Convergence on a shared outcome**	Voting, **unanimous**	**Conflict Resolution**	**High**

What did I find?

Decision Making

Jury outcomes are 🤦 **personal**, but their **reasoning and negotiation is situational**.

“Oh, i actually disagree”

“Yeah, i actually disagree too… we shouldn’t...”

What did I find?

Cognitive Conflict

Different viewpoints lead to ⚖️ better 🎌 joint outcomes, but **conflict may become** 😡 **personal**.

2019-03-31 18:21:57 **spryFox: i wont give a penny for veterans. If there were no veterans there would be no wars. I say 250-250-0**

2019-03-31 18:22:17 reasonablePanda: uhhh

2019-03-31 18:22:27 reasonablePanda: I don't think it works that way

2019-03-31 18:22:33 **spryFox: I'm a pacifist and I wont budge on that.**

2019-03-31 18:22:43 hippieMonkey: I can appreciate your stance A3TFPMETFAMJ35 however, I think its important to support people that allow you to be a pacifist

2019-03-31 18:23:16 **spryFox: Thats nonsense. If they would say "hell no we won't go" there would be no war**

2019-03-31 18:23:32 reasonablePanda: I still don't think it works that way

2019-03-31 18:23:39 reasonablePanda: that's why we got a draft

2019-03-31 18:23:42 hippieMonkey: And you wouldn't be free and enjoy freedom of speach

2019-03-31 18:23:43 spryFox: You are hopelessly naive

2019-03-31 18:23:44 hippieMonkey: speech

2019-03-31 18:24:06 spryFox: I am not free. The capitalist pigs are free. Us poor are there slaves

2019-03-31 18:24:21 reasonablePanda: I think you're just trolling

2019-03-31 18:24:25 spryFox: workers of the world arise; you have nothing to lose but your chains

2019-03-31 18:24:26 hippieMonkey: Agreed

2019-03-31 18:24:47 **reasonablePanda: for how pacifistic you are, you seem awfully aggressive**

2019-03-31 18:24:53 hippieMonkey: lol

2019-03-31 18:25:30 spryFox: I am just stating my opinion. Note that you don't see any rich capitalists among these veterans you want to help

2019-03-31 18:29:35 spryFox: 3> $0 not one penny for those who support wars

2019-03-31 18:29:42 reasonablePanda: that's 2 against 1

2019-03-31 18:29:51 **spryFox: I DO NOT AGREE. I WILL NOT SUPPORT VETERANS**

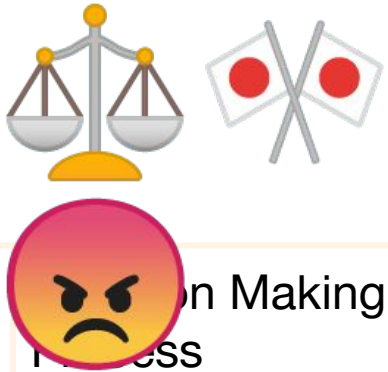
2019-03-31 18:29:55 hippieMonkey: ah democracy that our veterans fight so hard for at work

2019-03-31 18:30:15 spryFox: NO YOU IDIOTS THEY FIGHT FOR THE RICH CAPITALIST PIGS

2019-03-31 18:30:22 hippieMonkey: haha ok

2019-03-31 18:30:24 **reasonablePanda: it's just mturk dude**

2019-03-31 18:30:35 **spryFox: People like you are why we have right wing nuts in charge**



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Cognitive Conflict	Converge on a **joint outcome** based on **personal views**	Unanimous	**Conflict Resolution**	**High**

What did I find?

Creative Tasks

Situational outcomes depend on 👍👎 agreement and 👯 willingness to cooperate.

SAME TEAM
SAME PEOPLE
DIFFERENT
SITUATIONS

*“The team was able to **work as a unit to quickly identify a product slogan** in which everyone had come to an agreement with.”*

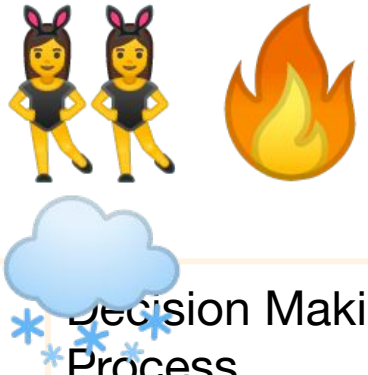
*“We worked really well together and came up with lots of **good ideas**!”*

*“We were **all able to pitch** in different inventive ideas.”*

*“There **wasn't much input** given from all members.”*

*“I don't think we worked particularly well together. **We didn't even agree on what 30 characters meant** exactly at the end. I don't think we were terrible but definitely not as good as the prior teams.”*

*“They seemed **lazy** and just wanted to do the **minimum amount of work**. They all jumped to go with a **terrible idea** without even bothering to think of other options. I also wasn't sure if they all **spoke English properly**.”*



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✌️ SCALED HUMANITY 🌎

🤟💖 ***Thank you!***

Mentors

💥🍫 Mark Whiting, 🌟💡 Michael Bernstein

Team

🎵🏄‍♂️Michelle Xing, 🌹👟 Yu-Jin Lee, 🎄🏂Ryan Foulke, 💻🏀N'godjigui Junior Diarrassouba, 🦵🗽 JD Zamfirescu, 🎨🐈Irena Gao, ⚖️💃 Emily Hu, 🐶🎧Laura Fiuza, 💉👑Phoebe Yao