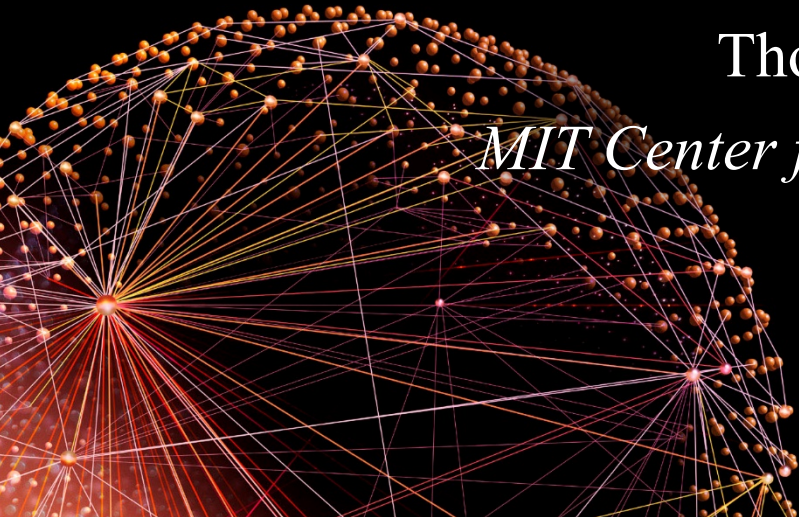
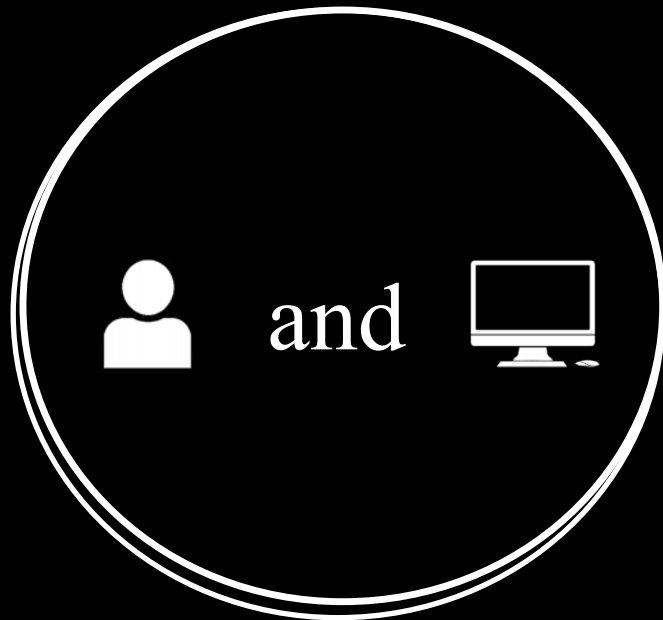


Human-Computer Collaboration

Thomas W. Malone

MIT Center for Collective Intelligence

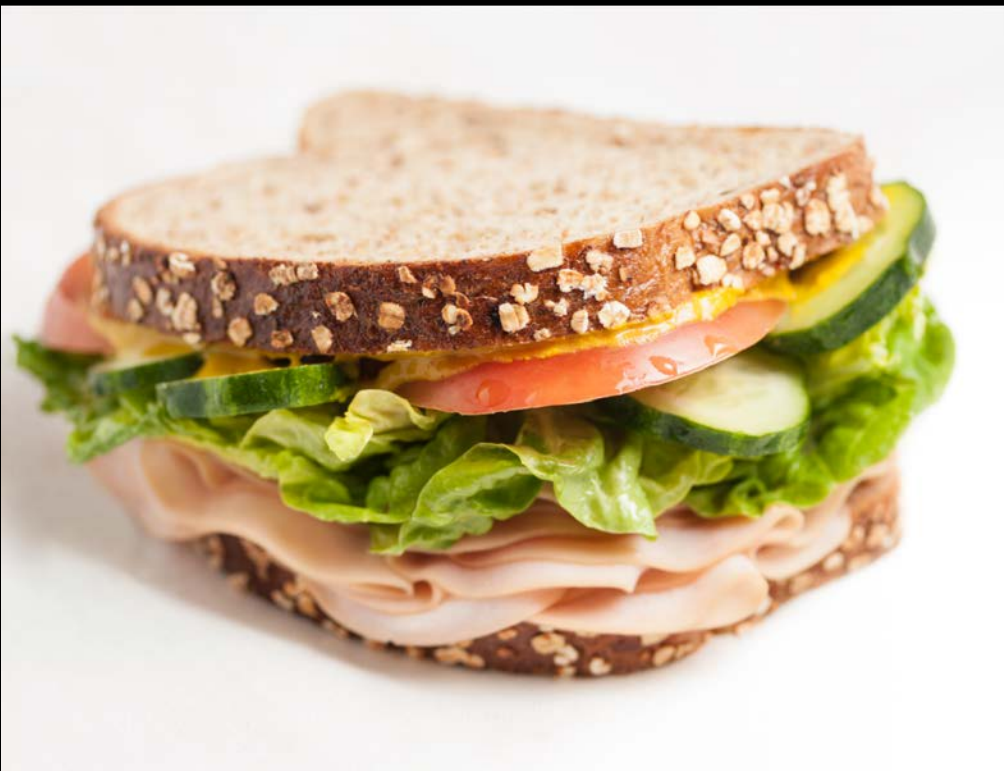




Superminds —

Groups of individuals acting together
in ways that seem intelligent











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From today's featured article



Roberto Luongo (born April 4, 1979) is a professional ice hockey goaltender from Canada. Employing the [butterfly style](#), he plays for the [Florida Panthers](#) of the [National Hockey League](#) and previously played for the NHL's [New York Islanders](#) and [Vancouver Canucks](#). Luongo is a two-time [NHL Second All-Star](#) (2004 and 2007) and a winner of the [William M. Jennings Trophy](#) for backstopping his team to the lowest goals against average in the league (2011). He has been a

finalist for the [Vezina Trophy](#) as the league's best goaltender (2004, 2007 and 2011), the [Lester B. Pearson Award](#) as the top player voted by his peers (2004 and 2007) and the [Hart Memorial Trophy](#) as the league's most valuable player (2007). Luongo is second all-time in games played as an NHL goaltender, and is third all-time in wins. He was named to the [2014 Canadian Olympic Hockey Team](#), where he won his second Olympic gold medal in a largely backup role to [Carey Price](#). ([Full article...](#))

Recently featured: [Killdeer](#) · [Jørgen Jensen \(soldier\)](#) · [Siege of Aiguillon](#)

[Archive](#) · [By email](#) · [More featured articles](#)

Did you know...

In the news

- In Iran, [widespread flooding](#) since late March kills at least 62 people (*flooding in Golestan Province pictured*).
- [Zuzana Čaputová](#) is [elected](#) president of Slovakia, becoming the country's first female president and its youngest.
- [A Special Counsel investigation](#), headed by [Robert Mueller](#), concludes and reports its findings to the [United States Attorney General](#).
- At least 160 people are killed in [attacks](#) against [Fulani herdsmen](#) in central Mali.



Flooding in Golestan Province, Iran

Ongoing: [Brexit negotiations](#) · [Venezuelan presidential crisis](#)

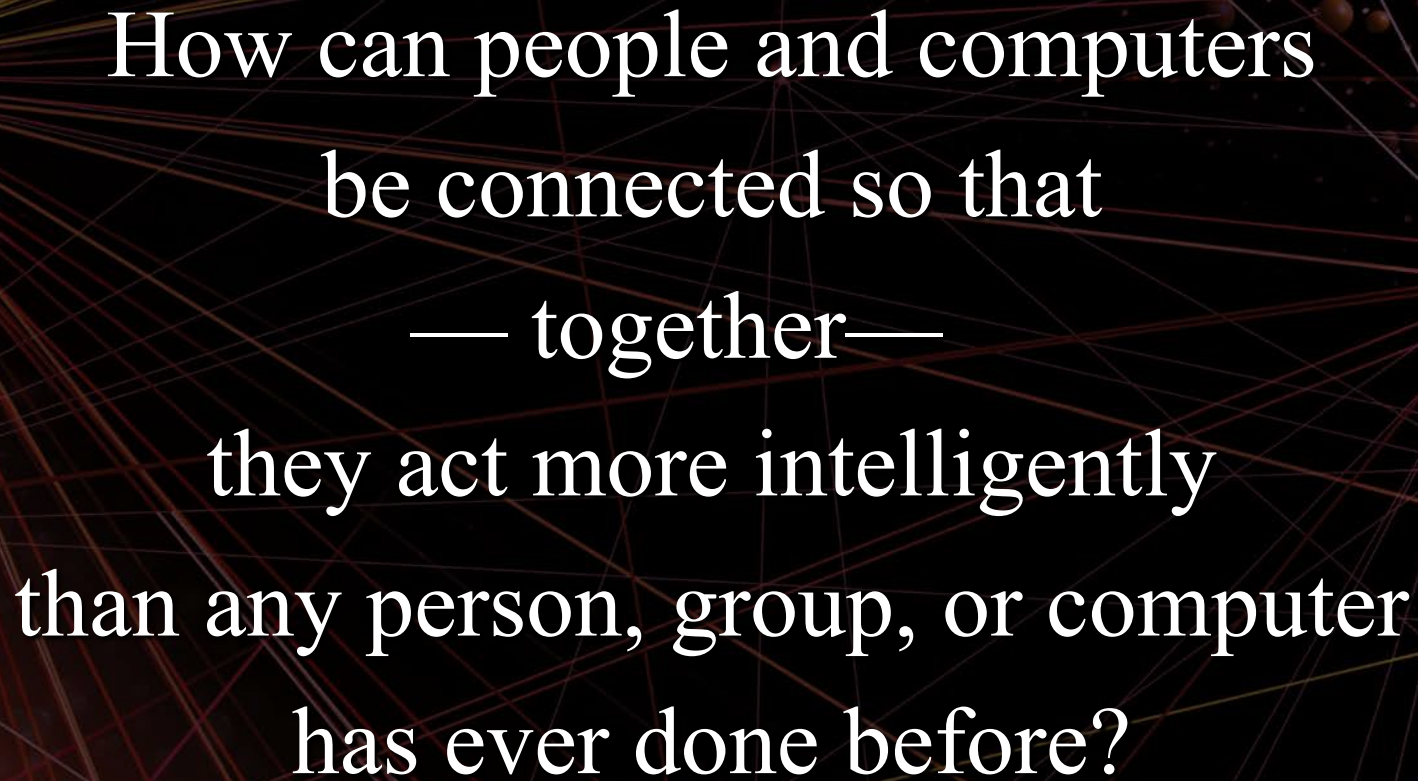
Recent deaths: [Nipsey Hussle](#) · [Tania Mallet](#) · [Geoff Harvey](#) ·

[Agnès Varda](#) · [Stephen Fitzpatrick](#) and [Audun Laading](#) · [Ed](#)

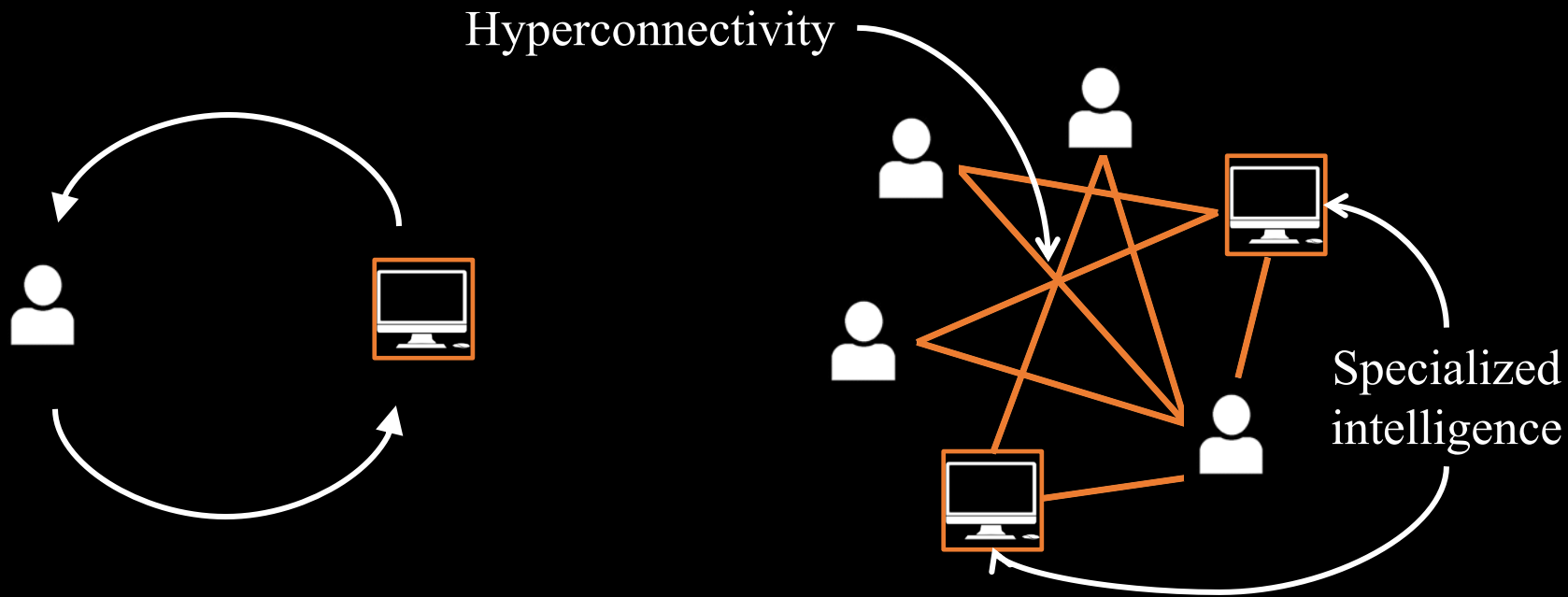
[Westcott](#)

[Nominate an article](#)

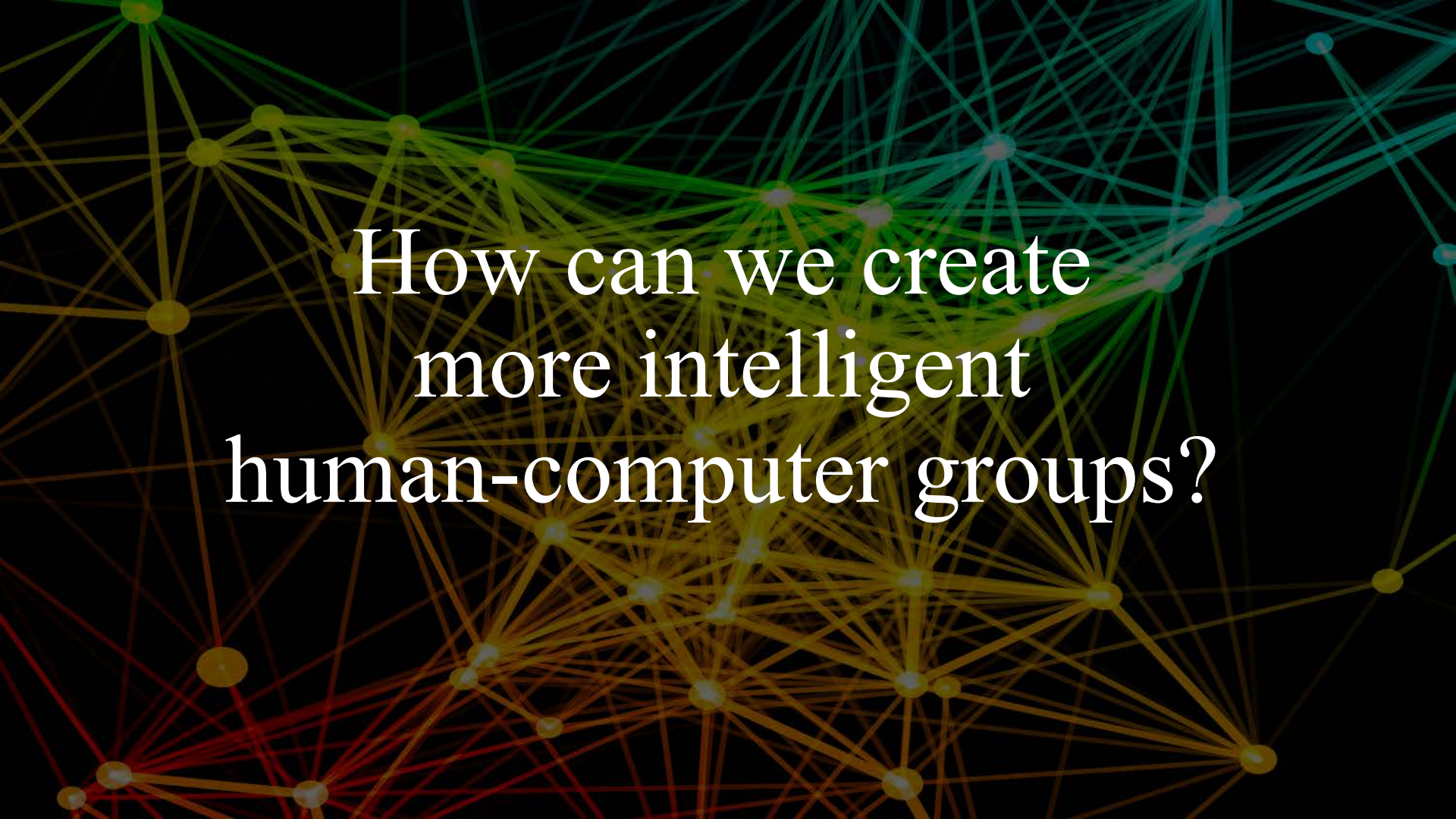
FAKE NEWS

The background of the slide features a complex network diagram. It consists of numerous small, glowing orange and red nodes connected by thin, light-colored lines. The nodes are distributed across the frame, with some appearing as bright, multi-pointed starburst patterns, suggesting hubs or highly connected nodes within the network. The overall aesthetic is that of a digital or neural network.

How can people and computers
be connected so that
— together—
they act more intelligently
than any person, group, or computer
has ever done before?

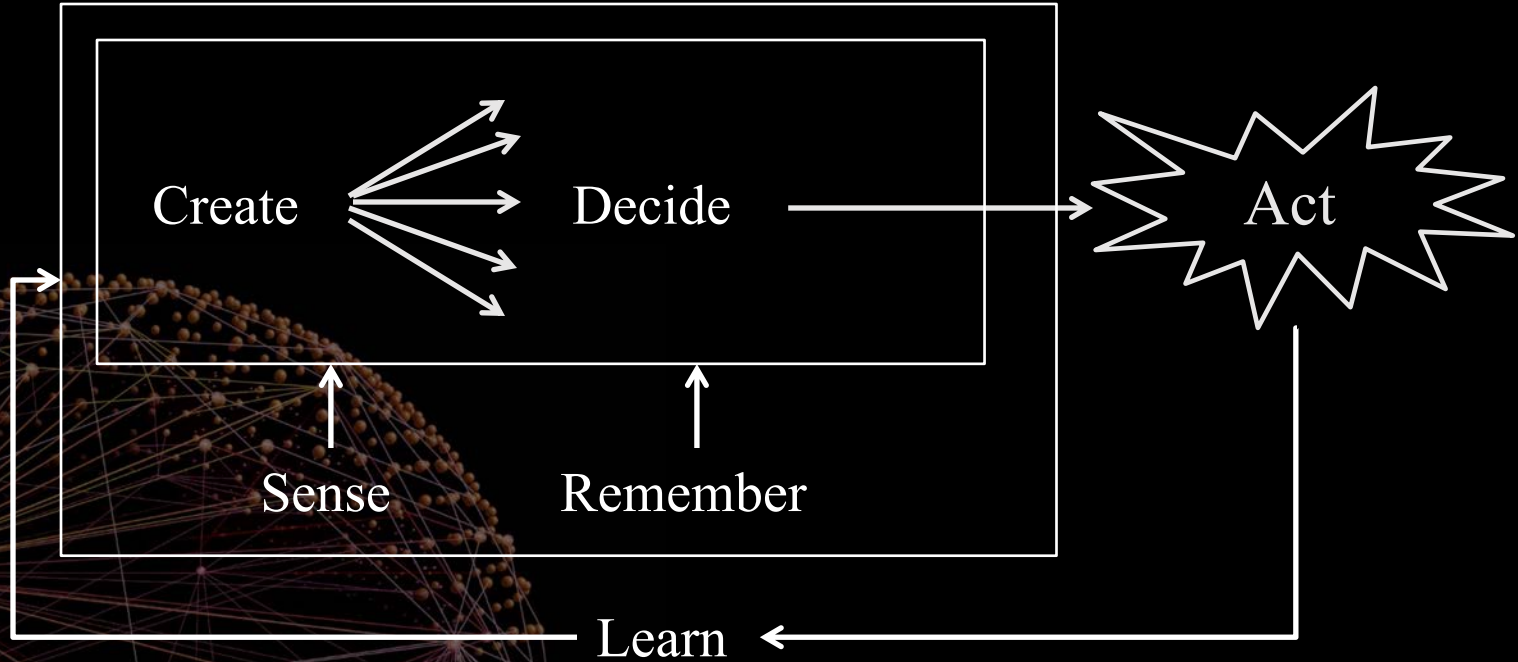


From humans in the loop . . . to computers in the group

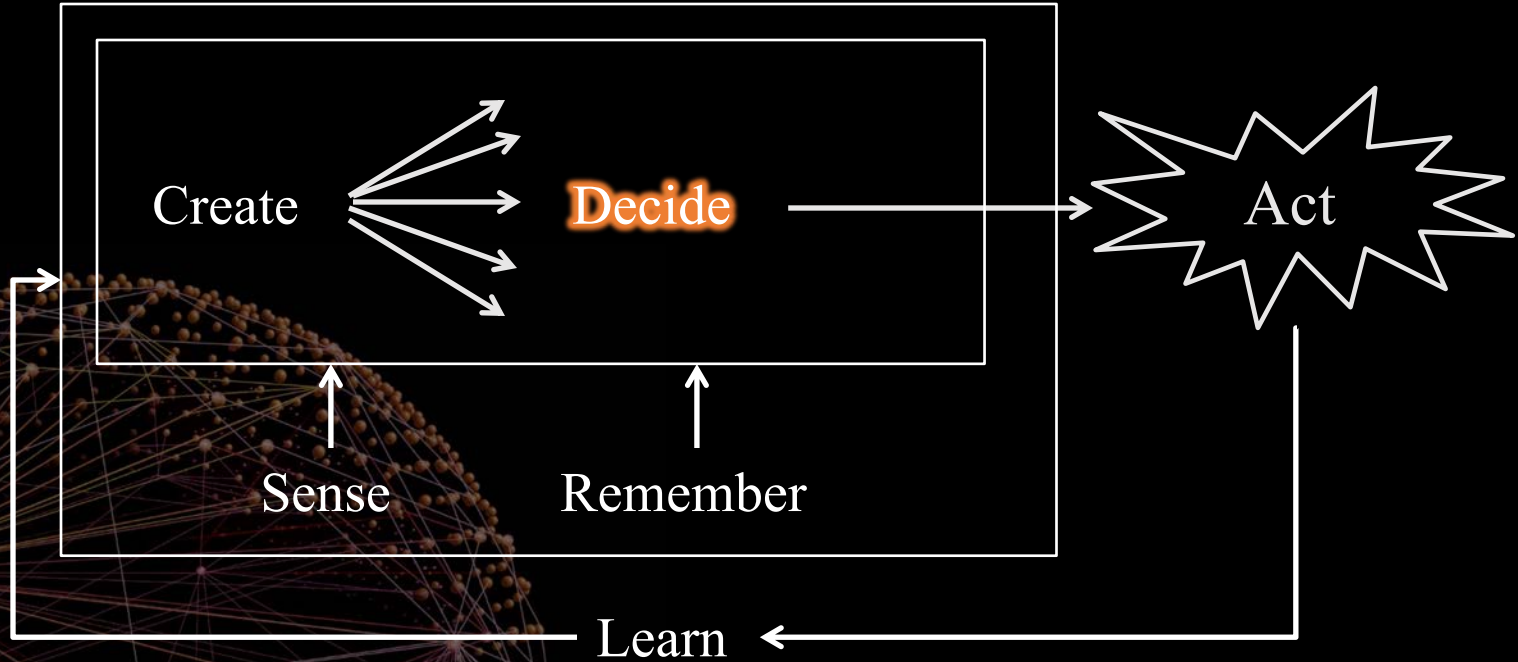


How can we create
more intelligent
human-computer groups?

Cognitive processes



Cognitive processes



Superminds for decision-making

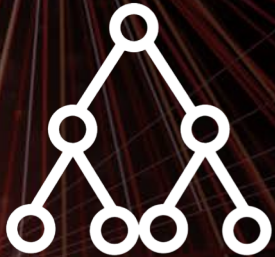
Hierarchies

Democracies

Markets

Communities

Ecosystems



Group decisions are made by:

delegating
them to
individuals in
the group

voting

all the pairwise
agreements
between
individual buyers
and sellers

informal
consensus
based on
shared norms
and reputations

the law of the
jungle and the
survival of
the fittest

Collective Intelligence Design Lab (CIDL)

Goal: Help groups design innovative new kinds of collectively intelligent systems to solve important problems

Faculty:



Thomas Malone
Sloan



Randall Davis
CSAIL



Bengt Holmstrom
Econ (Nobel laureate)



Roger Levy
Brain & Cog Sci



Sandy Pentland
Media Lab



Drazen Prelec
Sloan







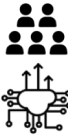





David Rand
Sloan



Daniela Rus
CSAIL

Conceptual moves for designing innovative superminds

Basic moves		Advanced moves
 Verbify		
 Zoom in	 Cognify	
 Zoom out		
 Specialize	 Assign	 Supermind Technify
	 Incentivize	
 Generalize	 Analogize	

Deloitte.

Future of Work

Activating the supermind of Deloitte to reimagine the way humans and machines work together



Jeff Schwartz



CI in the healthcare of tomorrow

Activating the corporate supermind of Takeda to help tackle the future challenges of global healthcare systems



Magda Schoenich

community² biotechnology

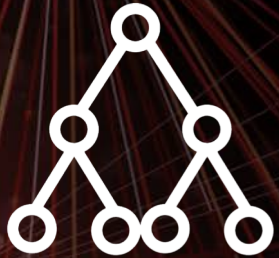
A new way of doing science

Creating the structural foundation for scaling groups of people doing biotech in new ways and changing how life science is done



David Sun Kong

Superminds for decision-making



Hierarchies



Democracies



Markets



Communities



Ecosystems

Prediction markets

- Participants buy and sell predictions about future events
 - E.g., buy a “share” predicting sales in Sept. between 1500 and 1600 units
 - If correct: get \$1
 - If wrong: get \$0
- Prices reflect “average” probability estimates.
- Prediction markets are often more accurate than other forecasting methods for product sales, elections, etc.

Will Donald Trump complete his first term?

Latest Yes Price
Best Offer
Best Offer

Latest Price

77¢ NC

78¢

Buy Yes

Buy No

23¢

The Rules

Donald Trump shall be president of the United States until conclusion of the four-year term to which he was elected in 2016. Temporary incapacity resulting in the temporary transfer of authority to an acting president shall have no bearing on the outcome of this market.

[Read the Full Rules](#)

Stats
24hr
7 Day
30 Day
90 Day
Candle
Line

PredictIt

Volume



Related Markets

@realDonaldTrump tweets 11/6 - 11/13?

200 - 209

20¢ 1¢

210 - 219

18¢ NC

497K Shares Traded

Trump resign in 1st term?

Yes

15¢ NC

No

85¢ NC

53,868 Shares Traded

@whitehouse tweets 11/7- 11/14?

149 or fewer

30¢ 9¢









150 - 159

20¢ 2¢

44,935 Shares Traded

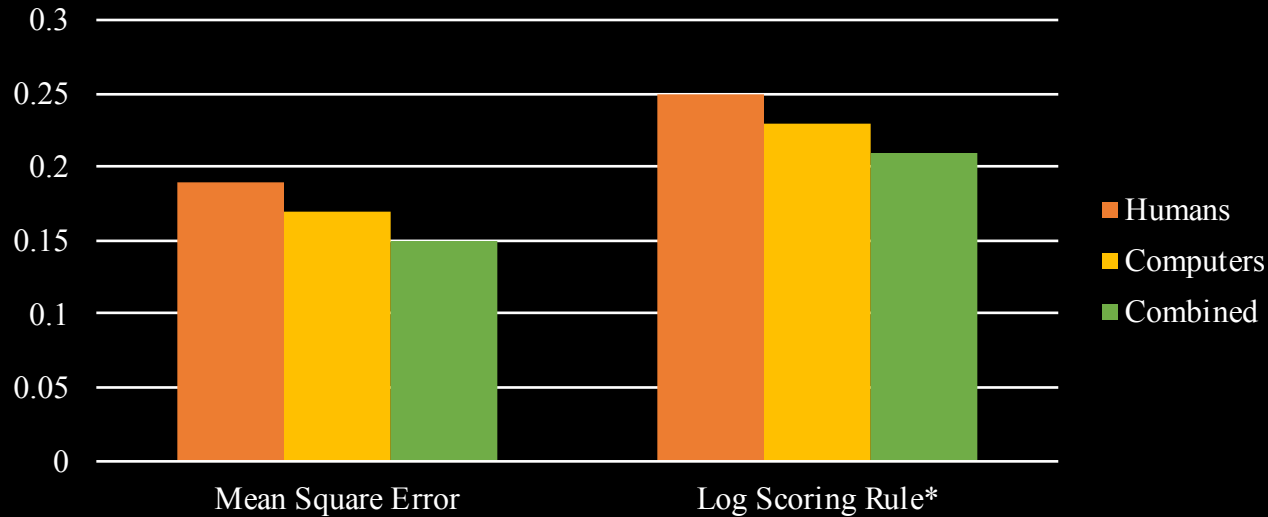


Who will win the 2020 U.S. presidential election?

Contract	Latest Yes Price	Best Offer	Best Offer
 Donald Trump	42¢ 1¢↑	42¢	<input type="button" value="Buy Yes"/> <input type="button" value="Buy No"/> 59¢
 Elizabeth Warren	19¢ NC	20¢	<input type="button" value="Buy Yes"/> <input type="button" value="Buy No"/> 81¢
 Joe Biden	13¢ 1¢↑	13¢	<input type="button" value="Buy Yes"/> <input type="button" value="Buy No"/> 88¢
 Pete Buttigieg	11¢ NC	12¢	<input type="button" value="Buy Yes"/> <input type="button" value="Buy No"/> 89¢
 Bernie Sanders	9¢ 1¢↓	10¢	<input type="button" value="Buy Yes"/> <input type="button" value="Buy No"/> 91¢
 Andrew Yang	7¢ 1¢↓	8¢	<input type="button" value="Buy Yes"/> <input type="button" value="Buy No"/> 93¢
 Hillary Clinton	5¢ 1¢↓	6¢	<input type="button" value="Buy Yes"/> <input type="button" value="Buy No"/> 95¢
 Mike Bloomberg	4¢ 1¢↓	5¢	<input type="button" value="Buy Yes"/> <input type="button" value="Buy No"/> 96¢



Prediction errors



Humans and computers combined are more accurate than either alone.

Nagar & Malone, 2011.

* All differences significant, $p < .05$

Superminds for decision-making



Hierarchies



Democracies



Markets



Communities



Ecosystems

In the Climate CoLab, you can work with people from all over the world to create proposals for what to do about climate change.

LEARN MORE

GET INVOLVED



The Climate CoLab is a project of the
MIT Center for Collective Intelligence
in collaboration with [many other organizations](#)

Check out:

[Prior Contest Winners](#)
[2013 Crowds & Climate Conference](#)

Featured contests [see all contests](#)



Shifting behavior for a changing climate

How can we shift perceptions, values, norms, and attitudes to inspire individuals and institutions to take action on climate change?

Top News

See Climate CoLab's recent features in [Grist](#), [Discovery News](#), [Popular Science](#), [Guardian](#), and [PBS NOVA](#).

Jun 20. [30 days until 15 contests close!](#)

Jun 18. [Registration open: Webinar on the Land Use contest](#)

Jun 9. [Climate CoLab hits 12,000 members](#)

May 28. [Spotlights on the community](#)



Proposal for [Energy-Water Nexus 2015](#) by SunSaluter

SunSaluter: a low-cost, passive solar tracker that produces clean water

DESCRIPTION

IMPACT

CONTRIBUTORS 2

COMMENTS 5

EVALUATION

POINTS

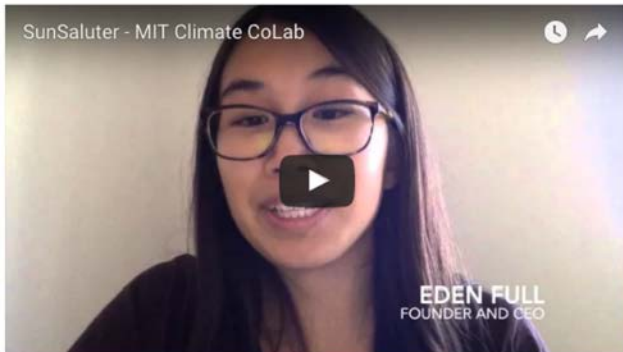
Show history

Pitch

The SunSaluter is a low-cost solar panel rotator which boosts efficiency by 30% and produces four liters of clean drinking water each day!

Description

Summary



1.5 billion people lack access to electricity, and 750 million have no clean water. These groups often overlap, leaving hundreds of millions of individuals without life's most basic necessities. There are technologies capable of remedying these issues, but none are simple nor affordable enough. Solar panels are too expensive, and clean water products frequently fail because they are not user friendly.

257 votes

26 supporters

Support Proposal



Subscribe

Share via CoLab messaging



PROPOSAL SUMMARY

SunSaluter: a low-cost, passive solar tracker that produces clean water

Team Proposal: Only members listed on the Proposal's Contributors tab will be able to edit this Proposal. Members can request to join the Proposal team on the Contributors tab. The Proposal owner can open this Proposal for anyone to edit using the Admin tab.

By: SunSaluter

Contest: [Energy-Water Nexus 2015](#)

What immediate actions can we take to address energy-water nexus challenges?



Leaders in health and science collaborate to anticipate the state of trust in medicine and healthcare in 2040

[Learn More](#)

Top News

[Facilitator's Note, 7 November 2019: Phase 2 Update](#)
[Facilitator's Note, 6 November 2019: Phase 2 Instructions](#)
[Facilitator's Note, 30 October 2019: Phase 1 Update](#)
[Facilitator's Note, 28 October 2019: Phase 1 Instructions](#)
[Facilitator's Note, 25 October 2019: Welcome](#)

[Trust CoLab scenario development exercise starts October 28](#)

9 minutes ago



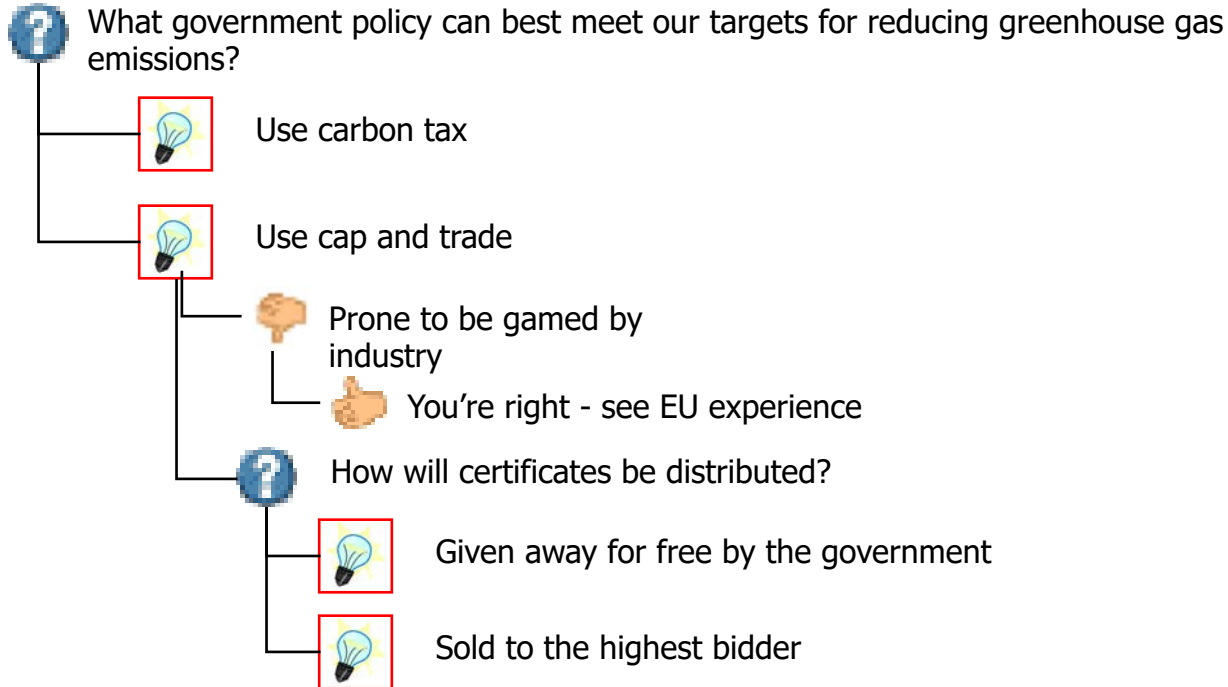
[ScottKnoer](#) added a comment to contribution [Personalized Medicine based in genomic sequencing and enhanced by AI](#)

[View all activities](#)



Rob Laubacher

The Deliberatorium Enables Deliberation at Scale



- Radically more compact
- Easy to find content
- Easy to avoid redundancy
- Easy to find gaps

- Deeper (collaborative) ideas
- Small voices - yes. Balkanization - no
- Skeleton can guide discussion
- Bias towards critical reasoning



Collaborative Innovation Networks

- Global trend prediction

Tribefinder uses NLP to find digital virtual tribes for predicting

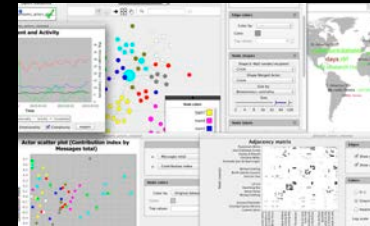
- Attitudes towards fake news
- Consumer emotions and tastes



- Organizational Analysis

E-Mail based social network analysis with RNN for predicting

- Customer satisfaction
- Employee attrition



- Individual “Honest Signals”

Happimeter/ML tracks emotions of

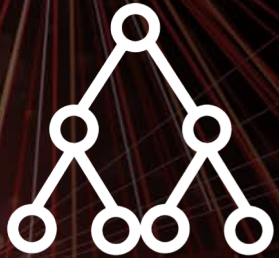
- office workers
- jazz musicians
- event audiences



Peter Gloor



Superminds for decision-making



Hierarchies



Democracies



Markets



Communities



Ecosystems

Ley Nacional Del Cáncer CoLab

Participa con nosotros y sé parte de un proceso histórico e innovador, donde tus ideas y propuestas para la formulación de la Ley Nacional del Cáncer, serán recibidas por los senadores y senadoras.

Creemos en la ciudadanía empoderada y en esta plataforma podrás ser parte activa en esta nueva forma de participación que fortalecerá nuestra Democracia.

Descarga el informe de resultados del proceso participativo sobre la Ley Nacional del Cáncer.



