

KNIGHTS OF THE ROUND TABLE

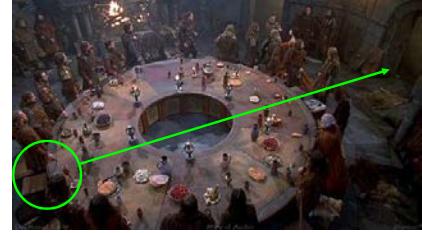
why sit in a circle?
every voice is equal.



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ANY SPACE HAS INHERENT HUMAN RELATIONS EMBEDDED

NOT every voice is equally "equal."
why sit in a circle?



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WHICH AD DO YOU VIEW MORE FAVORABLY?

TREAT THOSE WHO ARE SPECIAL TO YOU WITH A GIFT THAT CREATES MEMORIES

Make your family and friends a priority
Celebrate and rejoice in friendships and special times together
Visit www.fundestination.com to book your next vacation

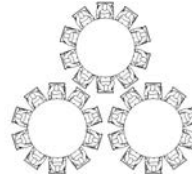
TREAT YOURSELF TO SOMETHING THAT YOU ALONE HAVE BEEN LONGING FOR

Make yourself a priority
Celebrate and rejoice in how special and unique you alone are
Visit www.fundestination.com to book your next vacation

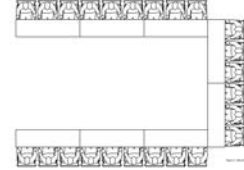
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HUMAN PERCEPTION AND BEHAVIOR ARE SHAPED BY SPACE

circular arrangement:
family-based ads more favorable



angular arrangement:
self-oriented ads more favorable



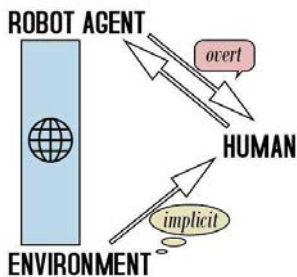
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Zhu (2012)

OVERT VS IMPLICIT INFLUENCE

overt influence:
chair locomotion, gestures

implicit influence:
chair location, arrangement



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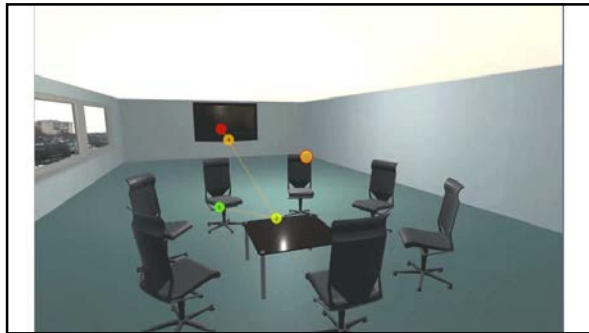
IMPLICIT INFLUENCE: SPATIAL ARRANGEMENT

Can we affect human perceptual attention by rearranging chairs in a scene?



Does rearrangement give people new ideas about what the space is for, and what is possible in it?

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SPATIAL ARRANGEMENT INFLUENCES HUMAN PERCEPTION

"Lecture, talk, movie, presentation," "Discussion, chat, social, meeting,"

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ARRANGEMENT ANALYSIS

MULTIPLE COMPARISONS

tv:aligned-table:aligned	0.0040745
table:circular-table:aligned	0.6919849
tv:circular-table:aligned	1.0000000
table:semi-table:aligned	0.9989179
tv:semi-table:aligned	0.9952656
table:circular-tv:aligned	0.0682029
tv:circular-tv:aligned	0.0045019
table:semi-tv:aligned	0.0118714
tv:semi-tv:aligned	0.0172216
tv:circular-table:circular	0.9045863
table:semi-table:circular	0.9823698
tv:semi-table:circular	0.9936055
tv:semi-tv:circular	0.9965766
tv:semi-table:semi	0.9999926

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OVERT INFLUENCE: MACHINE GESTURES

Describe what you saw in the video.
"Girl sitting in a non moving chair and the other motorized chair comes in and taps the chair she's sitting in until she gets up and leaves and the motorized chair follows."

How would you characterize the chair?
"Demanding."

What is the chair's intent?
"To get her up and out of the other chair."

What is the chair communicating to person?
"Get moving."

coded <ACCURATE> to intent

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OVERT INFLUENCE: MACHINE GESTURES

Describe what you saw in the video.
"A woman is sitting until another chair comes up and she walks away. The chair follows her."

How would you characterize the chair?
"Active."

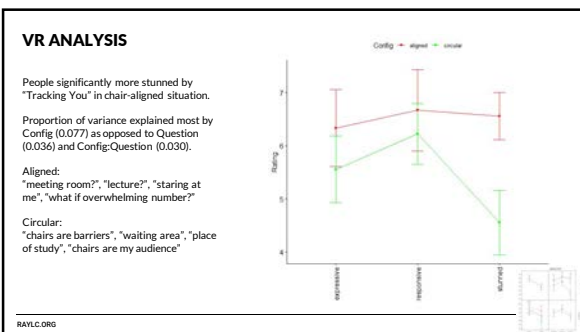
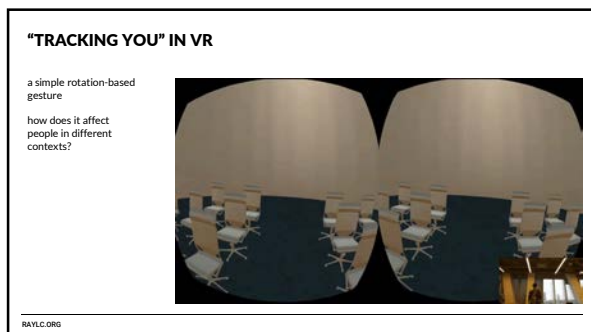
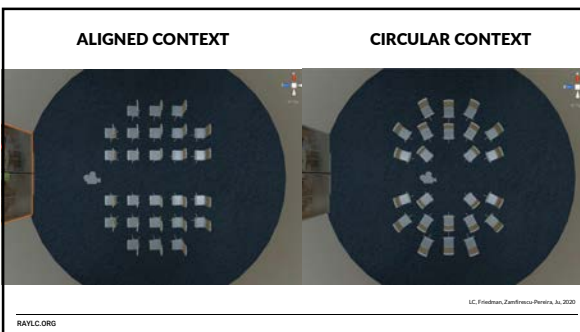
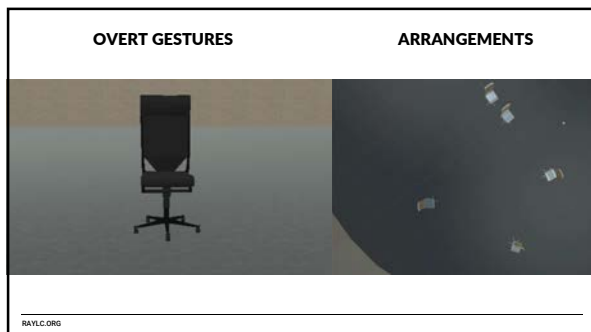
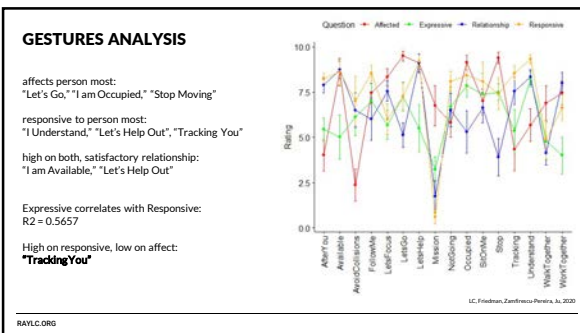
What is the chair's intent?
"To follow the woman."

What is the chair communicating to person?
"The chair wants to follow the woman to another area."

coded <CONTRARY> to intent

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LET'S WORK TOGETHER



AGENTS OF SPATIAL INFLUENCE

audience response depends on chair arrangement **and** particular gesture in VR.

2020



VRBAL: ML-BASED VR THERAPY FOR STUTTERING

as told to RAY LC, with YUKA FUKUOKA et al

2018



NYC MEDIA LAB | verizon | PARSONS

SPEECH DISORDERS ARE DEBILITATING

social stress
interviews / speeches / meetings
70 million sufferers worldwide



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THERAPIES ARE EXPENSIVE, TIME-CONSUMING, HARD TO FIND


what takes place here... is supposed to... mimic what happens here



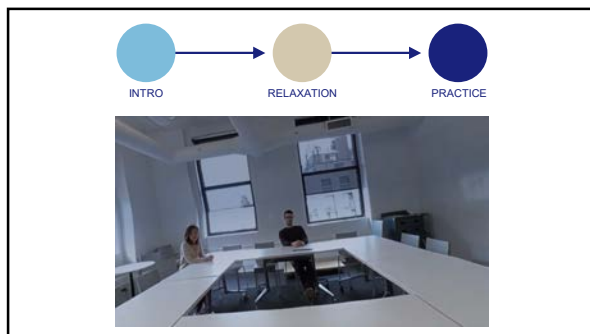
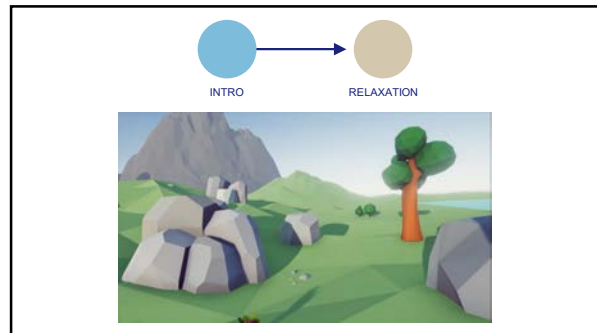
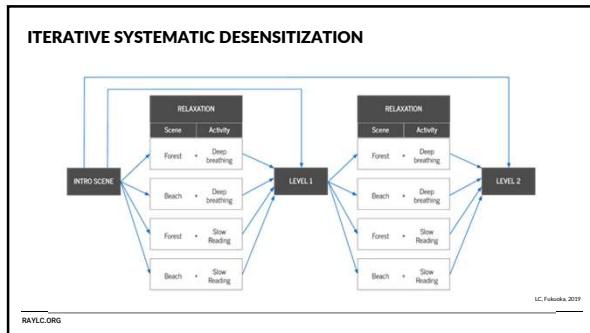
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SOLUTION: VIRTUAL REALITY + MACHINE LEARNING

VR (context) Machine Learning (customized) Therapy (get better)



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USER TEST STUTTERERS

National Stuttering Association
NYC Chapter.

40 user tests.

Survey:
reduced anxiety by 30%
80% of users want to incorporate routine

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USER TEST DETERMINING STRESS

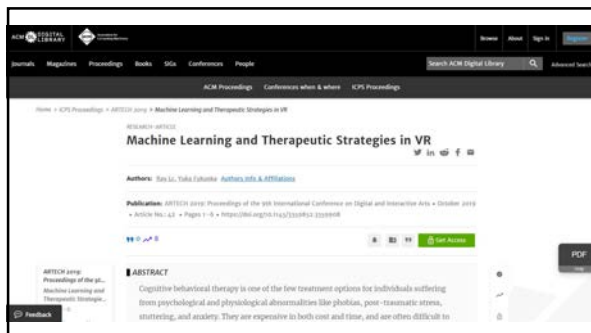
GSR (perspiration) sensor
anxiety level during test
incorporate into ML model

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WEAVABLE TECH: GESTURE-BASED ANXIETY SENSORS

as told to RAY LC, with CHANEL LUU

2018

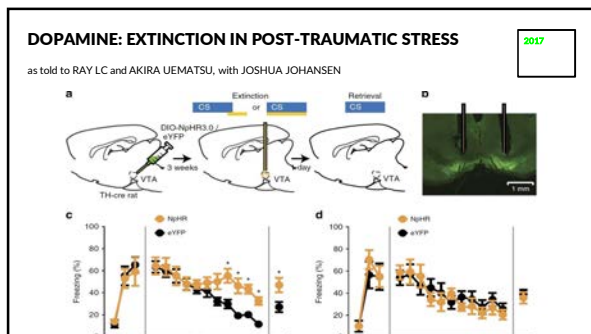


POSITIVITY FOR SOCIAL ANXIETY

Exposure doesn't address intrinsic motivation.
Need implicit rewards as "relief" (prediction error).

The block contains two photographs. The left photo shows a woman with her hand to her chin, looking thoughtful or concerned. The right photo shows a group of people sitting around a table in a meeting or collaborative work environment. A green arrow points from the first photo to the second.

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POSITIVITY FOR SOCIAL ANXIETY

self esteem games:
pick cards, say 2 positive things
why they should vote for you

The block features an illustration of a person with their arms raised in a celebratory gesture, standing out from a group of other people. The scene is set against a dark background with a spotlight effect on the person with raised arms.

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POSITIVR

Work with Stefan Hoffman (Boston University)
Students Rudra Trivedi, Sai Konda (Northeastern)

Answer trivia questions -> social tasks:
Find people who got the same answers right.
Find people who got right what you got wrong.

The block shows a screenshot of a trivia question interface with the question "Which continent is the largest?" and three answer options: "Europe", "Asia", and "Africa". A green arrow points from the interface to a 3D virtual environment showing a person sitting at a desk in a room.

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MIDI-ROX: REVERSIBLE ONE-HANDED DRESS FOR SENIORS

as told to RAY LC, MICHAEL TRANQUILLI, and ALYSSA WARDROP

The image shows a person in a wheelchair being assisted with a reversible one-handed dress. Another person is standing next to them, and a mannequin is visible in the background.

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ESCAPE: 360 EVACUATION TRAINING FOR THE ELDERLY

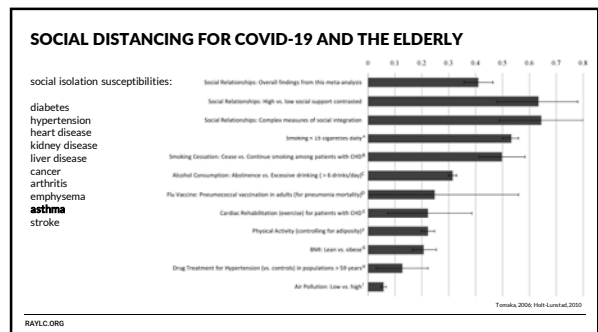
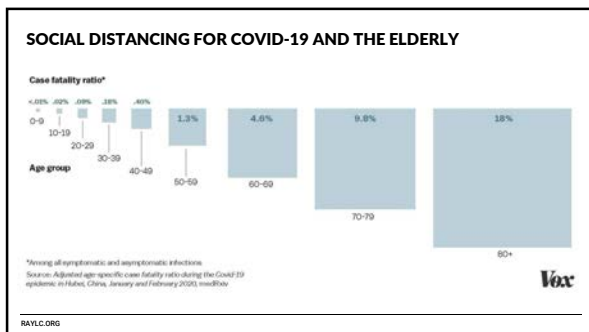
as told to RAY LC, MISO KIM, ERIN BRENNEMAN, and XINYUN CHEN

2020

WINDOW OF [SOCIAL] OPPORTUNITY

as told to RAY LC, MISO KIM, VALERIA RAMDIN, and BEYZA SAHIN GUN

2020



WINDOW OF [SOCIAL] OPPORTUNITY

Set daily reminders
 Play together with Window
 Check right along together with Window

CREATIVITY ENHANCES WELL-BEING

mental and physical play
 drawing improves PD
 digital dance with relatives

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SOCIAL CONNECTION BY INTERACTIVITY

- common excursions to church, etc
- interactive table to eat together
- virtual walk for exercise



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ROUTINE SET BY MED REMINDERS, MONITORING, INTERESTS

- hand washing reminder
- telemedicine with caretaker
- routine but not boredom



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THANK YOU!

verizon | **NYSCI** | **PARSONS** | **CORNELL TECH** | **ROUYIC** | **ABS ELECTRONICA**

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