Exercise in Virtual Reality

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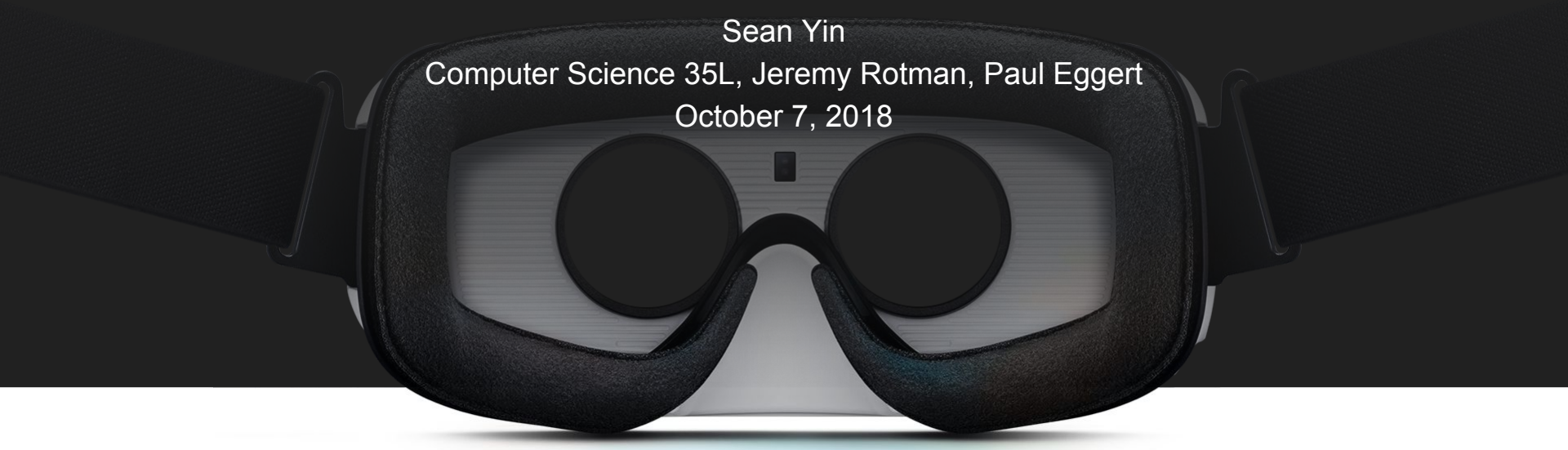
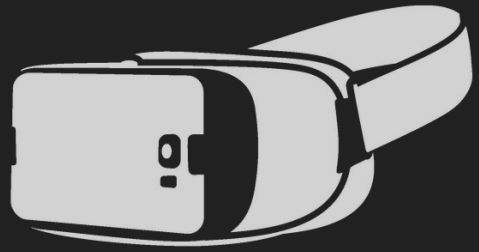


VR Improving Performance in Exercise



- Suppressing private body consciousness and exceeding your limits
- Less pains and more gains (10% less pain, 2 min more exercise, 3 bpm lower heart rate)
- Private body consciousness. Understanding yourself, feeling tired, feeling sore, feeling dead
- Interesting study, but where's the process? Where's the causation?
- We want details! Effect of different imagery! What's the most immersive! How to optimize this!
- Good premise, lacking data.

Power of Private Body Consciousness

- Awareness of one’s self, peace with mind becomes peace with body
- Diving into the illusion reduces pain, a study of burn victims (awareness brings pain, happiness lies in the depths)
- Better than better than nothing, better than TV!
- Dental devastation, distractions defeated by VR, barely better to almost painless
- The power to separate the mind and body

Burn Pain

"Virtual reality pain control during burn wound debridement in the hydrotank."

	Control Condition	VR Condition	*t*(10) Value	*P*
A. All patients, n = 11, mean scores (SD)				
Worst Pain	7.6 (1.9)	5.1 (2.6)	2.92	0.015
Unpleasant	6.7 (1.6)	4.1 (2.8)	2.84	0.017
Time	7.6 (3.1)	3.6 (2.5)	5.24	< 0.001
Fun	0.9 (1.6)	3.8 (3.3)	2.95	0.015
	Control Condition	**VR Condition**	***t*(5) Value**	***P***
B. Patients with presence > 3.4, n = 6, mean scores (SD)				
Worst Pain	7.2 (1.7)	3.7 (2.1)	2.92	< 0.05
Unpleasant	6.5 (1.2)	2.5 (1.6)	5.48	0.003
Time	6.7 (3.6)	2.3 (1.6)	3.53	0.017
Fun	1.5 (2.0)	5.7 (3.2)	2.64	< 0.05
	Control Condition	**VR Condition**	***t*(4) Value**	***P***
C. Patients with presence < 3.4, n = 5, mean scores (SD)				
Worst Pain	8.1 (2.1)	6.8 (2.2)	1.38	0.24 NS
Unpleasant	6.9 (2.0)	6.0 (2.7)	< 1 NS	NS
Time	8.8 (2.2)	5.2 (2.5)	3.88	< 0.05
Fun	0.2 (0.5)	1.6 (1.5)	1.87	0.14 NS

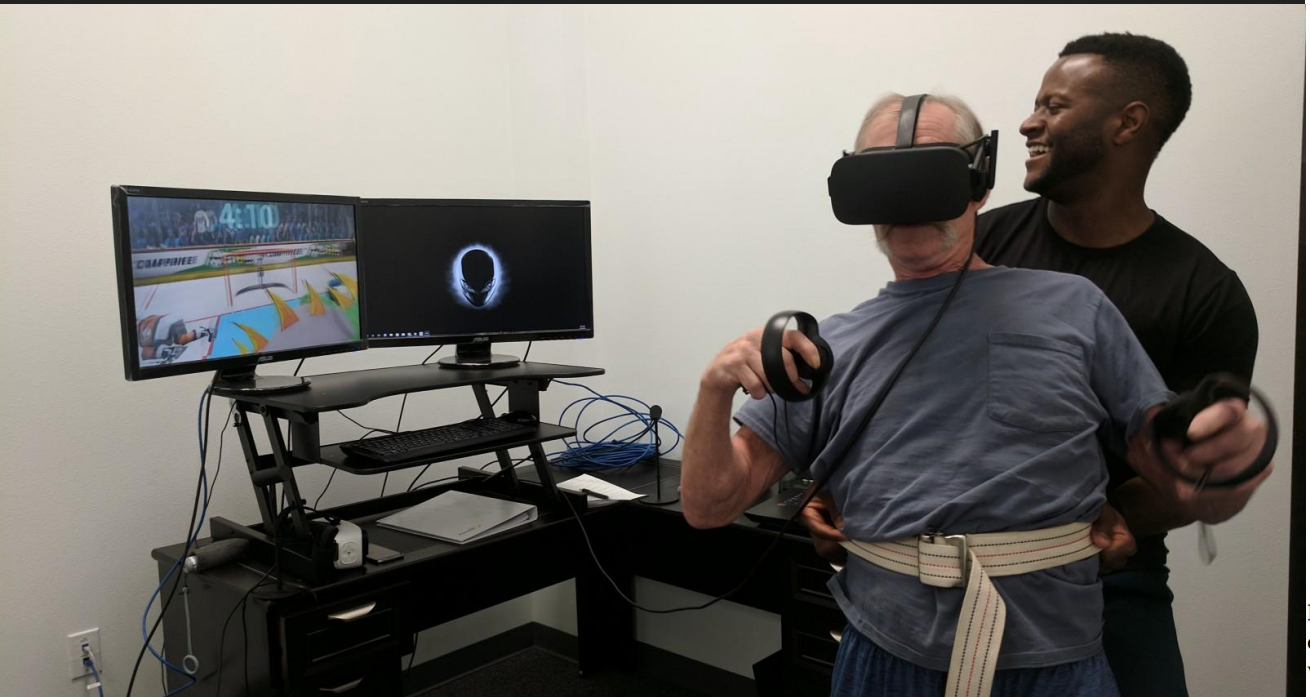
For all statistical comparisons reported in this study the $\alpha = 0.05$.

Practical Applications

- Physical rehabilitation, massive improvements, freeing you from the therapist's office
- The stroke study, getting a sense of balance (removing private body consciousness to improve adaptability and recovery of motor functions)
- The first step to becoming buff and the loner’s revolution, giving confidence to go out and exercise
- Motivation to work out indoors and on your own time (many projects, especially games)
- Motor function training for work, school, skills
- VR painkiller
- etc.

VR For Rehab

"Experimental studies of virtual reality-delivered compared to conventional exercise programs for rehabilitation."



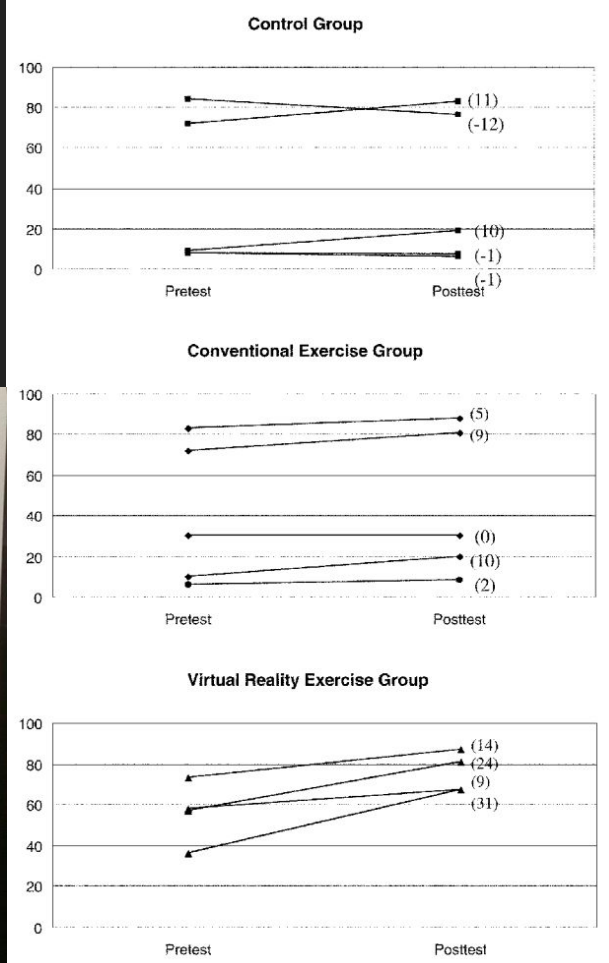


FIG. 2 Pretest and posttest values for individuals in each of three groups: control, conventional exercise, and virtual reality exercise.

Bibliography

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