

# FRIENDS TODAY, STRANGERS TOMORROW?

## Assessing the long-term effects of «prosocial» VR products

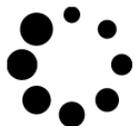
NECS (European Network for Cinema and Media Studies) Conference 2021

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ERC Advanced Grant «An-Iconology. History, Theory, and Practices of Environmental Images»

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European Research Council  
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UNIVERSITÀ DEGLI STUDI DI MILANO  
DIPARTIMENTO DI FILOSOFIA  
“PIERO MARTINETTI”

## STARTING IDEA OF THIS PRESENTATION:

**VIRTUAL REALITY SHOULD BE PROVED TO PROMOTE NOT SIMPLY EMPATHY,  
BUT *LONG-TERM* EMPATHY**



## MAIN OBJECTIVES:

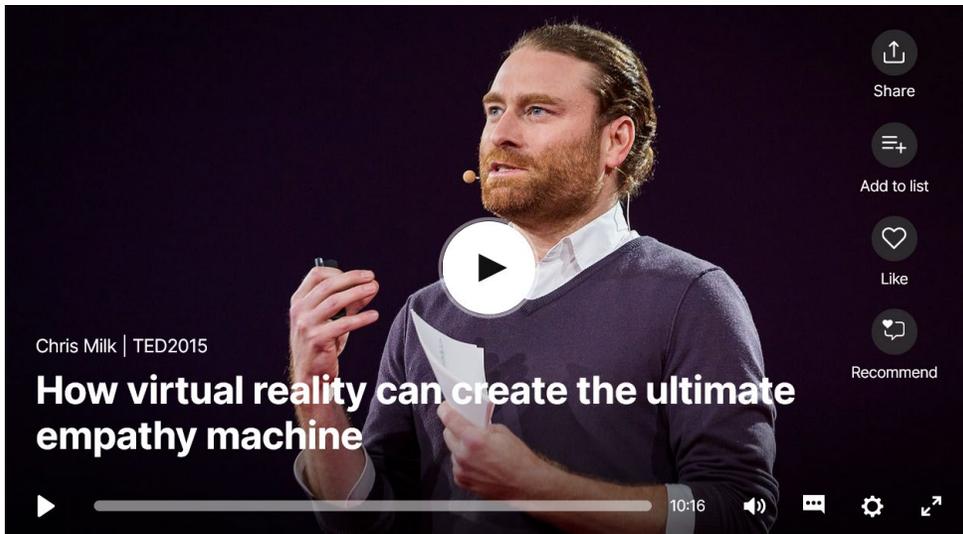
1. Defending this idea by deconstructing the usefulness of «flash-empathy»
2. Presenting and discussing existing evidence about VR and longer-term empathy
3. Drawing some conclusions as to how to further study this issue



## A very famous starting point: *CLOUDS OVER SIDRA* (2015)



It shows the life of Sidra, a 12-year-old Syrian girl who escaped war and settled at Za'atari Refugee Camp in Jordan.



It started the now widespread rethoric of virtual reality as the ultimate «**empathy machine**»

→ Virtual reality as a medium that more than any other in the past is able to trigger an immediate and strong empathic reaction.



If not in the academic domain,  
Milk's proposal has been accepted and deployed quite uncritically in the political domain.



WORLD  
ECONOMIC  
FORUM

*Clouds over Sidra* premiered at the World Economic Forum in Davos with supporters including UN Secretary General Ban Ki-moon. Since then, it has become a tool of the UN's advocacy for the Syrian crisis.



“Last night I saw a deeply moving video entitled *Clouds over Sidra*. It is an amazing virtual reality production of the starkness of life in the Za’atari Refugee Camp through the eyes of a beautiful young girl by the name of Sidra.

She says: **“I have been here a year and a half and that is long enough...”**

*But no one knows when it will be safe to go home, nor what will be left for them when they return.”*



I often think back on my visits in recent years to refugee camps in Turkey, Jordan and Iraq. Children asked: “Why am here? What did I do wrong? When can I go home?” I have no answer. I have only **shame and deep anger and frustration** at the international community’s **impotence to stop the war.”**

Secretary-General Ban Ki-moon,  
Third International Humanitarian Appeal for Syria  
March, 2015

...And it has been followed by several other similar projects, not limited to the refugee issue



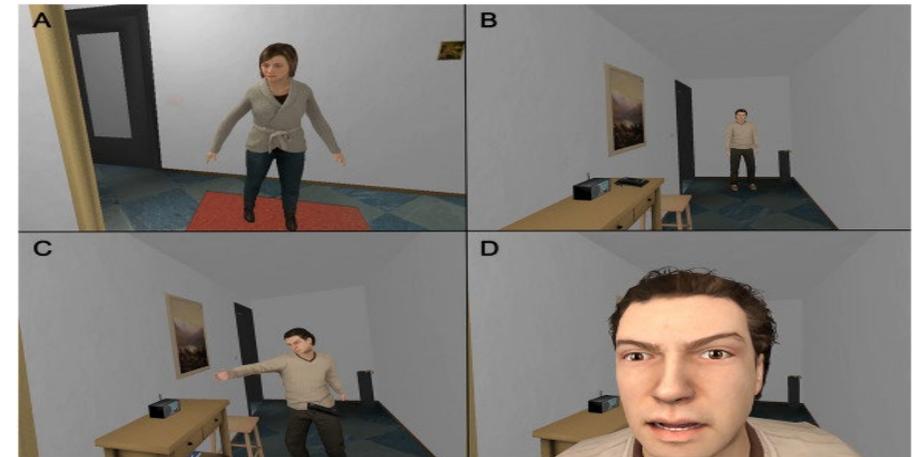
Contrast & World Vision, 2018



Peter van Apeldoorn & Daan Tan, VR Gorilla, 2019



Stanford University's Virtual Human Interaction Lab, 2017



Violent males becoming the victim of domestic violence, Seinfeld and colleagues 2018

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A widespread trend to read virtual reality as a **prosocial tool**, which has already started being **monetized**

**However**, one can see serious reasons to put such reading into question

→ Unpacking it:

**Virtual reality as «empathy machine»**  Two assumptions:

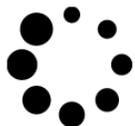
**1. Physical proximity = Psychological proximity**

(i.e. if we are physically close to someone in VR, we are going to feel psychologically close to them as well)

**2. Psychological proximity → Protracted in time**

(i.e., the assumed psychological closeness is supposed to be maintained after the end of the VR experience)

 I will focus on assumption 2

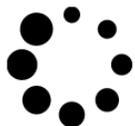


## MAIN CLAIM

### 2. Psychological proximity → Protracted in time



If this is not the case, then there is no reason to use VR in order to promote empathy  
(Even if VR can indeed promote empathy in the moment of the experience)



To understand why



**First step:**

**What we actually mean by «EMPATHY» (if we use it politically)**



**Understanding** another's condition and **taking a stance** with regard to it, having adopted a **psychological and ideological attitude that lasts in time** and thus **translates into concrete action**



- Prosocial behaviours
- Helping behaviours

VS «**FLASH-EMPATHY**»



**Temporarily being impressed** by another's condition, possibly with **transitory feelings of sadness and/or compassion**

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## Why «flash-empathy» is not enough?

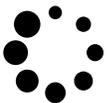
- «Flash-empathy» is now-or-never:

It must be exploited immediately in order to obtain concrete contributions from targeted individuals



- «Flash-empathy» is high-cost/low-gain:

- It must always target new individuals, as each one's contribution is not expected to be sustained in time
- It hardly justifies the technological and economic burden of virtual reality





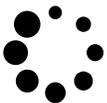
If «flash-empathy» is not enough, we must necessarily turn to **LONGER-TERM EMPATHY**



1. **What is the available evidence regarding the possibility of VR to promote longer-term empathy?**
2. **By means of which methods and procedures can we further explore this issue in the future?**



Two experimental studies who tried to assess VR-based long-term empathy.



# Virtual Embodiment of White People in a Black Virtual Body Leads to a Sustained Reduction in Their Implicit Racial Bias

Domna Banakou<sup>1,2</sup>, Parasuram D. Hanumanthu<sup>3</sup> and Mel Slater<sup>1,2,3,4\*</sup>

2016



Based on previous studies that failed to show a sustained reduction of racial bias, this paper presents an embodiment technique that results in a **reduction of bias that lasts «at least one week»**.

Each participant (all white) entered a VR scenario **embodying either a black or white body**.

After a 5-minute orientation, the participants went through a 10-minute Tai Chi lesson with a virtual teacher.

Each participant was administered a racial IAT (Implicit Association Test) two times:

- 1 week before the VR experience;
- **1 week after** the VR experience.

## Racial IAT (Implicit Association Test)

→ **Assesses the participants' implicit associations between the concepts of White/Black and Good/Bad**



**Advantage of this type of measure:**

Compared to explicit self-reported measures, they may **avoid social desirability bias**

## ➔ EXPERIMENT RESULTS:

Embodying the black body → Reduction of implicit racial bias 1 week after the end of the experiment

### HOWEVER...

#### 1) Training effect:

One week later, participants may have become more familiar with the IAT  
→ They may simply have learnt how not to make their prejudice emerge

#### 2) The wrong association?

It may be in fact that we tend to associate White with Good and Black with Bad  
→ However, in Western culture, do these colors necessarily refer to race?



#### 3) ... 1 week is still too little!

In relation to a concrete political agenda, we may want to make sure that the effects of VR last (way) longer



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In relation to a concrete political agenda, we may want to make sure that the effects of VR last (way) longer



RESEARCH ARTICLE

## Building long-term empathy: A large-scale comparison of traditional and virtual reality perspective-taking

2018

Fernanda Herrera<sup>1\*</sup>, Jeremy Bailenson<sup>1</sup>, Erika Weisz<sup>2</sup>, Elise Ogle<sup>1</sup>, Jamil Zaki<sup>2</sup>



- A VR-based application designed to improve the participants' attitude towards **homeless people**
- Temporal range of the empathy effect «upgraded» to **8 weeks**

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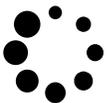


We are put in the shoes of a homeless person and we live some of the typical situations this condition involves

→ Sleeping in a car and being targeted by the police



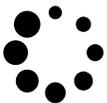
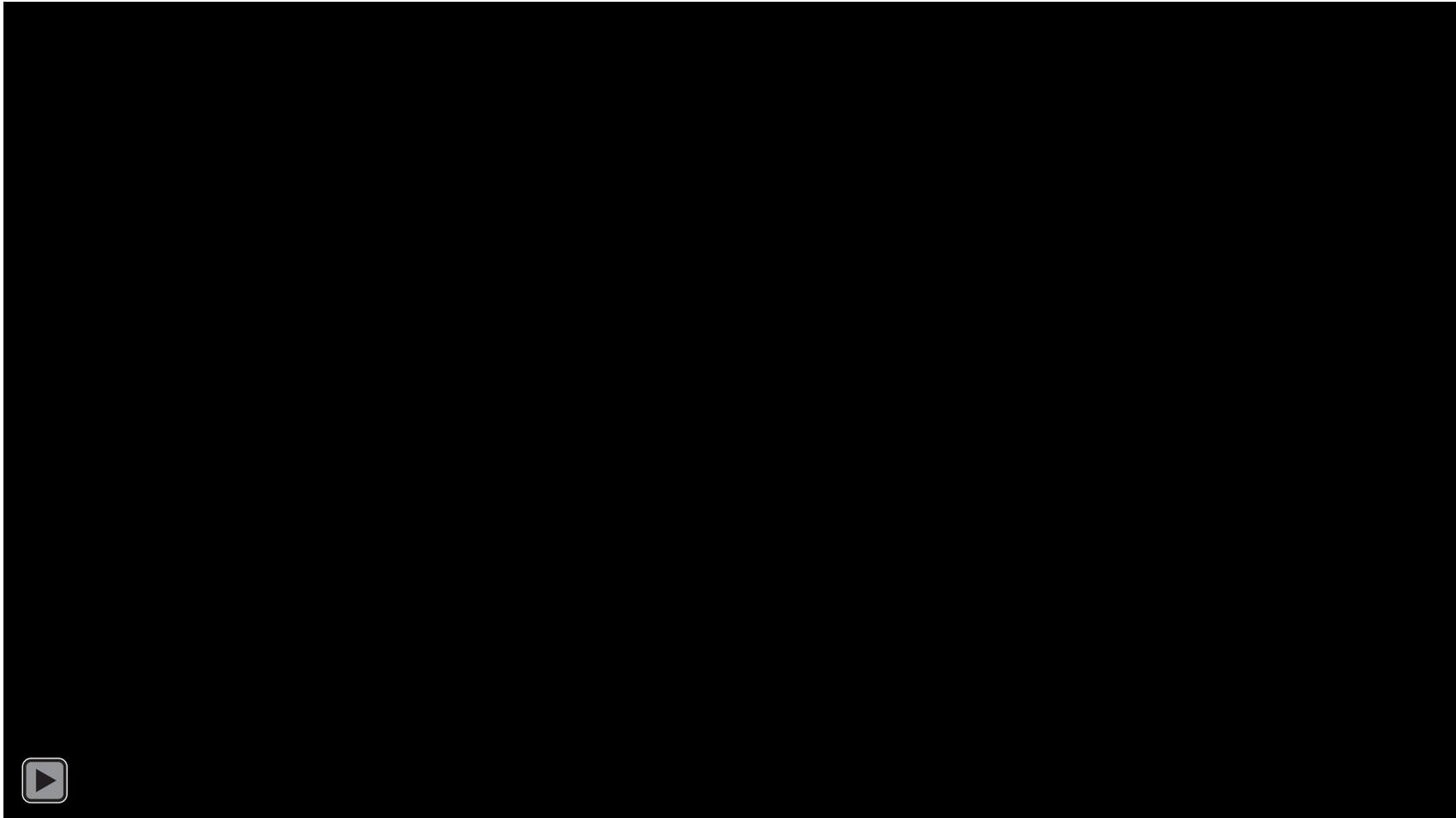
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*Becoming Homeless: A Human Experience*  
(Stanford University's Virtual Human Interaction Lab, 2017)

We also learn about how other people that we meet have become homeless

→ A woman who became homeless to escape domestic violence



## **Aim of the experiment:**

Testing the effectiveness of VR in producing empathy, as compared to a textual alternative

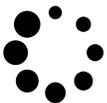
Participants in the experiment were divided into two groups:

- One group experiencing *Becoming Homeless* in virtual reality
- One group reading a narrative version of the storyline of *Becoming Homeless*



### **Empathy was assessed:**

- **At different points in time (up to 8 weeks)**
- **By means of behavioural measures, in addition to self-reported measures**



Right after the VR or narrative experience

00

- Level of agreement with a proposition for affordable housing for vulnerable people
- **Signing a petition supporting the proposition above**
- **Donating the compensation for the experiment (or part of it) to homeless people**

2 weeks later

01

- **Writing a letter to their elected officials concerning the issue of homelessness**

4 weeks later

02

- Level of agreement with another proposition about affordable housing

8 weeks later

03

- **Writing a letter to a friend about the issue of homelessness**



## EXPERIMENT RESULTS:

### Self-reported measures:

VR led to more positive, longer-lasting attitudes toward the homeless up to 8 weeks after the VR experience.

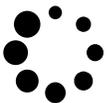
### HOWEVER...

### Behavioral measures:

VR was significantly more effective than narration **only right after the experience**

→ **No strong evidence for longer-term concrete prosocial outcomes**

 **These are the outcomes that we may want to be most concerned about!**



## TAKE-HOME MESSAGES:

- **Adequate observation time spans are needed when studying VR-based long-term empathy**

Herrera and colleagues' 8 weeks is a good starting point → Let's further expand it!

- **Behavioural measures are best-suited...**

VR is truly relevant only if it actually affects the users' behaviour → Let's monitor it directly!

- **... And they can helpfully bring us back to Earth.**

Behavioural measures «don't lie» (?) → Let's trust them so as to have a realistic idea of the power of VR.

**Grazie per l'attenzione!**

