

# ***DOES DATA DRIVEN COMPASSION EXIST?***

***BY  
MARGARET MELONI***

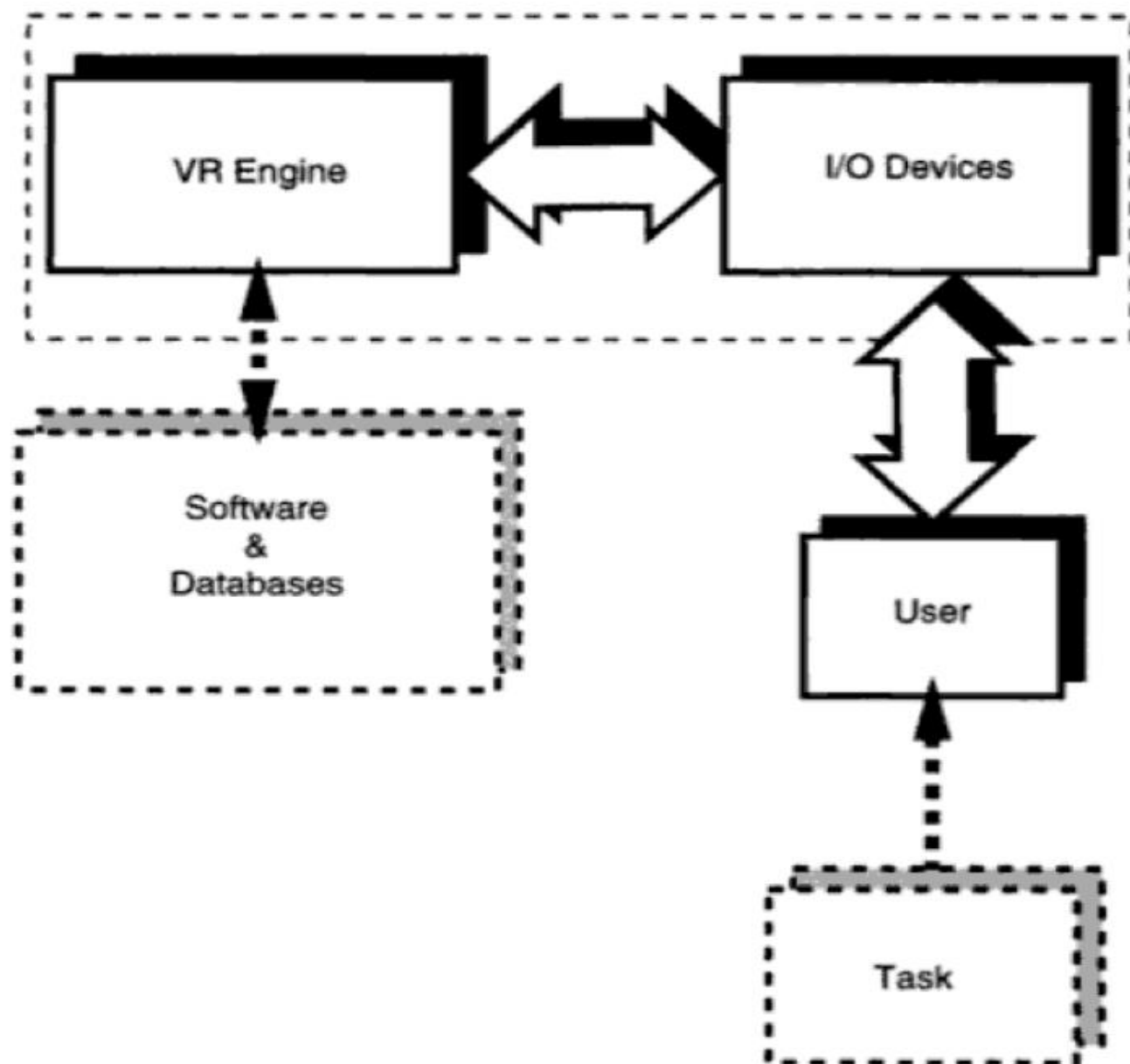
***PNC SUMMER 2016***



Photo courtesy of Hotel 22 by Elizabeth Lo

“Big data, which started as a technological innovation in distributed computing, is now *a cultural movement by which we continue to discover how humanity interacts with the world* — and each other — at large-scale.”      Drew Conway - *Head of Data, Project Florida*

# VR System Architecture



**Fig. 1.11** The five classic components of a VR system. From Burdea and Coiffet [1993].  
© Editions Hermes. Reprinted by permission.

# Empathy is NOT Compassion

Compassion has three components:

1. A cognitive component:  
"I understand you"
2. An affective component:  
"I feel for you"
3. A motivational component:  
"I want to help you"

# Empathy and Compassion: On the Brain



[https://upload.wikimedia.org/wikipedia/commons/8/86/Empathy\\_Children.jpg](https://upload.wikimedia.org/wikipedia/commons/8/86/Empathy_Children.jpg)

# Can Virtual Reality Lead to Compassion?



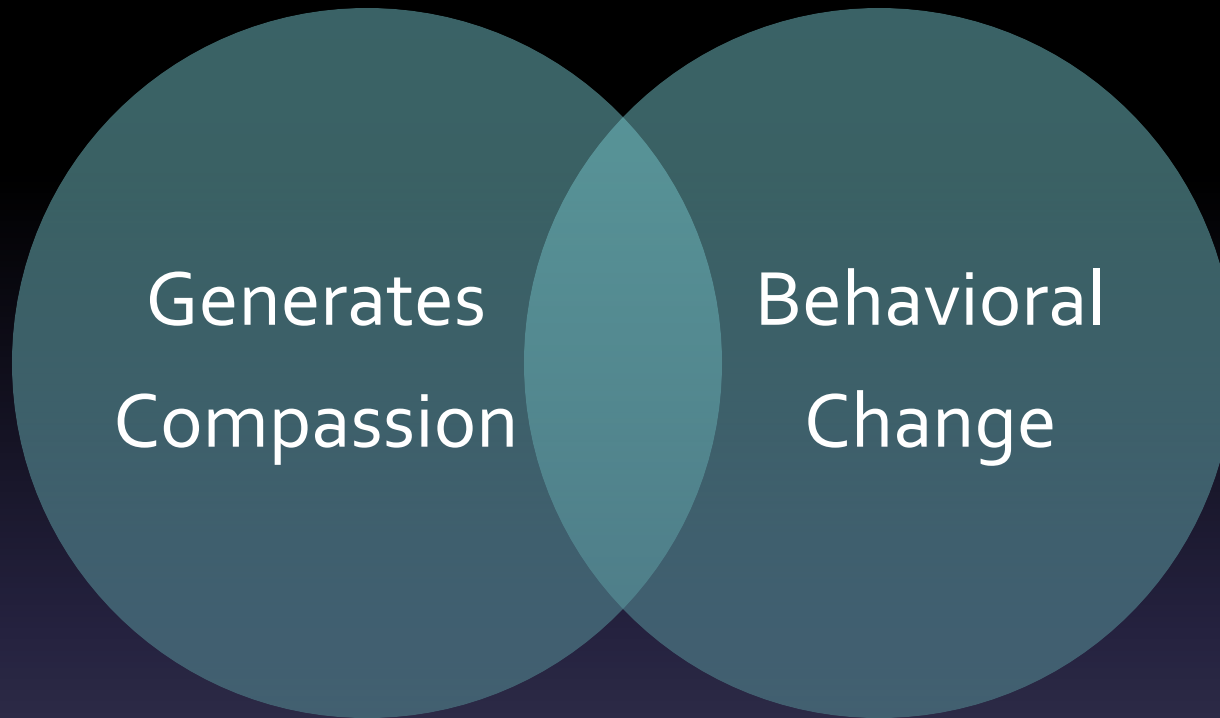
Images courtesy of <http://www.emblematicgroup.com/hunger-1>

Virtual reality has the ability to put people right at the center of a disaster:

The earthquake in Nepal, the life of a Syrian refugee.

If it is overused, will people become desensitized?





“If I look at the mass I will never act. If I look at the one, I will.” – Mother Teresa



Photo courtesy of Hotel 22 by Elizabeth Lo

## *References*

Bein, Steve. *Compassion and Moral Guidance*, 2013.

Bloom, Paul. "Against Empathy." *Boston Review*, September 10, 2014.  
<http://www.bostonreview.net/forum/paul-bloom-against-empathy>.

Burdea, Grigore C., and Philippe Coiffet. *Virtual Reality Technology*. John Wiley & Sons, 2003.

Claus Lamm, Jean Decety, and Tania Singer. "Meta-Analytic Evidence for Common and Distinct Neural Networks Associated with Directly Experienced Pain and Empathy for Pain." *Neuroimage* 54, no. 3 (2011): 2492–2502.

"Compassionate Leaders Are Effective Leaders." Accessed November 11, 2013.  
[http://greatergood.berkeley.edu/article/item/compassionate\\_leaders\\_are\\_effective\\_leaders](http://greatergood.berkeley.edu/article/item/compassionate_leaders_are_effective_leaders).

## *References – continued*

Decety, Jean, Karen E. Smith, Greg J. Norman, and Jodi Halpern. "A Social Neuroscience Perspective on Clinical Empathy." *WPS World Psychiatry* 13, no. 3 (2014): 233–37.

Falconer, Caroline J., Mel Slater, Aitor Rovira, John A. King, Paul Gilbert, Angus Antley, and Chris R. Brewin. "Embodying Compassion: A Virtual Reality Paradigm for Overcoming Excessive Self-Criticism." *PLOS ONE* 9, no. 11 (November 12, 2014): e111933. doi:10.1371/journal.pone.0111933.

Klimecki, Olga M, Susanne Leiberg, Matthieu Ricard, and Tania Singer. "Differential Pattern of Functional Brain Plasticity After Compassion and Empathy Training." *Social Cognitive and Affective Neuroscience*, 2013, nsto60.

Lo, Elizabeth. "Hotel 22 by Elizabeth Lo on Vimeo." *Videos*. Vimeo. Accessed July 31, 2016. <https://vimeo.com/138190538>.

## *References – continued*

“Mission | VHIL.” Accessed July 31, 2016. <https://vhil.stanford.edu/mission/>.

Myrow, Rachael. “Stanford’s Virtual Reality Lab Cultivates Empathy for the Homeless.” KQED Arts. Accessed July 25, 2016. <https://ww2.kqed.org/arts/2016/06/27/stanfords-virtual-reality-lab-cultivates-empathy-for-the-homeless/>.

“One Startup’s Quest to Save Refugees With Virtual Reality | WIRED.” Accessed August 6, 2016. <http://www.wired.com/2016/07/ryot-darg-mooser-disaster-vr/>.

Ricard, Matthieu. *Altruism: The Power of Compassion to Change Yourself and the World*. 1st North American edition. New York, NY: Little, Brown and Co, 2015.

Sun Joo Ahn, Jeremy N. Bailenson, and Dooyeon Park. “Short- and Long-Term Effects of Embodied Experiences in Immersive Virtual Environments on Environmental Locus of Control and Behavior.” *Computers in Human Behavior* 39 (2014): 235–45.

## *References – continued*

“What Is Big Data? - Blog.” Accessed July 30, 2016.  
<https://datascience.berkeley.edu/what-is-big-data>.

Whyte, Jennifer. *Virtual Reality and the Built Environment*. Routledge, 2007.