

**From:** Deepak Chopra <[REDACTED]>

**To:** Ken Zolot <zolot@mit.edu>

**CC:** Sanjay Sarma <sesarma@MIT.EDU>, Carolyn Rangel <[REDACTED]>

**Subject:** Re: - MIT - VR -

**Date:** Sat, 01 Dec 2018 12:17:50 +0000

**Attachments:** OutlookEmoji-1486494082887\_email-signature-order.jpg.jpg

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Ken  
Thanks for these notes  
Sanjay great to meet you  
Also thanks for the links  
I will look at them all  
These are great questions and discussion points  
I'm not sure I have the expertise to intelligently discuss all of them but I believe that with the diversity of interests and unique minds at MIT we can go deep into the nature of fundamental reality and how VR AI and immersive experiences can shift cognition perception and lead to creativity and even higher vision flow experiences and transcendence - not to mention - emergence , accelerated evolution and treatment of mental / physical disorders .  
Looking forward to our afternoon together and see where we go !  
Thanks for the opportunity !



Deepak Chopra MD

[REDACTED]  
[REDACTED]  
[Chopra Foundation](#)

[Jiyo](#)

[Chopra Center for Wellbeing](#)

[www.discoveringyourcosmicself.com](http://www.discoveringyourcosmicself.com)

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On Dec 1, 2018, at 7:01 AM, Ken Zolot <zolot@mit.edu> wrote:

Deepak,

Allow me to please bring Sanjay Sarma into our email discussion. I'm delighted that Sanjay will be your host on Monday. It was Sanjay who forged the connection between MIT and Shekhar Kapur. Perhaps you two would want to exchange emails or a phone call between now and Monday.

There's a lot of material below. If you don't have time to read this now, the key message is to e-introduce you to Sanjay. You two can explore the rest as you see fit.

Here are possible discussion topics for your visit.

These questions have come about based on thoughts from a few collaborators: Sanjay, our teaching assistant Yao Wang (who you also met with Shekhar when you were at Harvard in September), and our colleague Kana Okano, a research scientist in our Brain and Cognitive Sciences department.

Sanjay's topics are best summarized in the three articles which you read last week, but I'll re-paste the links here for easy reference.

1. "Imagination, Computation, and Self-Expression", by Harrell, 2012, here: <https://www.dropbox.com/s/yzqdq6hnudbus2l/Imagination%2C%20Computation%2C%20and%20Self-Expression.pdf?dl=0>
2. "Rethinking Feelings: An fMRI Study of the Cognitive Regulation of Emotion", Ochsner, Bunge, Gross, and Gabrieli, 2002, here: <https://www.dropbox.com/s/omknrdoep5n37tu/Rethinking%20Feelings.pdf?dl=0>
3. "Buddha's Brain: Neuroplasticity and Meditation", by Davidson and Lutz, 2008, here: <https://www.dropbox.com/s/m6su9awz556txx7/Buddha%27s%20Brain.pdf?dl=0>

Kana Okano has contributed to our Integrated Learning Initiative, which investigates human learning effectiveness. Kana wonders about...

- The effects of mindfulness on improving academic achievement (somewhat touches upon the 3rd article above, on neuroplasticity and meditation). There's evidence showing how practicing mindfulness can also improve not only physical health but also academic achievement.
- How far can the placebo effect go? Although it's well known that the placebo effect is typically seen in the medical field and shows how one's mind can affect one's physical well-being. However, there's some research showing that it can even expand to the Stroop effect (cognitive control)... <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3794044/>
- Are there people who are more or less affected by things such as mindfulness, the placebo effect, cognitive reappraisal (relates to the 2nd article above, on cognitive regulation of emotion)? There are people who are more or less able to be hypnotized. Would the same apply for above mentioned cognitive effect/states?
- How can we help patients who believe that they are disconnected from their own mind/thoughts to realize that they do in fact have control over their own mind? Kana deals with patients who have schizophrenia who believe that there are external forces controlling their mind and thoughts. We use fMRI neurofeedback to show them that what they do/think/feel is actually reflected in their own brain. This gives them a renewed sense of control and ownership of their brain that they seemed to have lost due to their illness. However, this treatment is not scalable. How can we give back sense of control to these patients without expensive scans?

Yao Wang, is a graduate of Berklee College of Music, and has worked with Shekhar Kapur on film scoring projects. Yao also brings expertise in 3D audio.

- Yao notes that when sound is perceived to come from the same direction as a visual stimulus, the credibility of the virtual experience is greatly increased. While purely visual VR experiences can be made, adding 3D audio greatly magnifies the impact and depth of a VR experience. As such...

- What key role did audio play in the creation of Finding Your True Self?
- How did you lead the audio team in creating a unique sonic identity for the experience?

Yao also suggests we discuss whether/how you've explored sound's role in facilitating shifts in our brainwave states.

- Have you explored sound therapy and binaural beats in your work?
- How do you define the concept of spirituality in connection with music and through music?

A few more topics Yao has explored with our class, given our overall focus on storytelling in VR, and its implications for learning and creativity.

- In the VRScout article, "Deepak Chopra Hopes You'll Find Your True Self in VR", you mention that your goal with mixed reality technology is to further therapeutic tools and reduce our reliance on pharmaceuticals, predicting that eventually doctors will be prescribing VR experiences instead of pills. VR has already been proven to be effective towards managing pain and distress during medical procedures. What are some other therapeutic applications for virtual reality? And, more broadly, how do you anticipate VR to change Health and Wellness?
- You used WEVR for "Finding your True Self". Why did you choose this medium to portray your ideas? What are the benefits compared to traditional media?
- In your article "The Future is accelerating - Will humans fit?", you mention company Neuralink's vision to implant a "digital brain layer" that would interface with the neocortical and limbic layers of the human brain to allow our 100 billion neurons to effortlessly communicate with the Internet at ultra-high bandwidth.
  - How can interactions with machines improve our psychology and even raise our consciousness?
  - What would it mean to be human?
  - Is there a worry that over time, AI advancement will diminish human competence and erode our ability to think critically?

And, finally, we asked for open-ended comments from the people who signed up to hear your talk. This will be a bit chaotic, but I selected a few responses you might enjoy scanning:

Can spirituality inflect modern online, residential, and hybrid education - even at a technologically driven school like MIT?

Adult Development (Kegan's and Fisher's models), Integral Theory (Ken Wilbur, Kosmic Consciousness)

I am involved in some design classes and am curious how storytelling and asking questions can help to come up with revolutionary ideas.

Your works influenced in my profound ways. I got a PhD quantum physics and became a yoga instructor based on ideas that I discovered in your works. I am now an educational researcher and software developer

What are the key elements in seeing a person's reality through metaphysical principles and how do these elements blend into realizing self? I am attempting to create programs and experiences from MIT that provide a deep and unique realization for people around the world.

I am very interested in the use of VR and education. I worked in the film industry for 12 years and feel a synergy growing between education, industry and VR experiences.

What can't meditation help with?

How can AI lead to leading less stressful lives?

I'm interested to learn more about the evidence to support the notion that immersive experiences yield better learning and/or creative outcomes.

I am working on professional development for graduate students. One of the primary barriers we face is that students do not prioritize their own development. I am trying to think creatively about overcoming this barrier. Also, how best to keep them engaged while learning.

I am one of the lecturers from Nigeria at MIT for the 2018 Fall Semester under the MISTI Empowering the Teachers Program.

I'm interested in how Chopra's ideas about quantum entanglement and consciousness can inform how we develop virtual, augmented, and mixed reality technologies.

Brain development in learning a second language

Today's VR audience seems to be hooked on high Adrenalin experiences which is quite different from the meditational experiences your are pioneering. How do we re-position VR to the public as a tool for calm and mediation?

I'm interested in the intersection of education, creativity, and self-expression - which I think bears some relation to Mr Chopra's work on consciousness and the primacy of the human spirit.