

The background of the entire page is a composite image. The upper portion shows a night sky with a bright, multi-pointed starburst or lens flare effect in the upper right quadrant, surrounded by wispy, light-colored clouds. The lower portion shows a panoramic view of a city at night, with numerous lights from buildings and streets. The city lights are reflected in a semi-transparent white horizontal band at the very bottom of the image.

ONE HUNDRED DAYS OF LOCKDOWN

From the virtual to the reality
Mel Slater

**Dedicated to the people in the Event Lab
Past and Present**

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Past and Present**

Between 14th March and 21st June, 2020, Spain was in an almost total lockdown. Our research lab at the University of Barcelona was closed, and everyone was working at home. I felt the need to write my thoughts almost every day as time progressed. These ranged over many topics. This document is multisensory – it includes text, pictures, music and video and it is best read online.

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Day 1 - reality and unreality

Mel Slater <melslater@gmail.com>

Fri, 13
Mar,
11:11

to Event-lab

hi,

I hope everyone is adjusting well to the new situation. We live in "interesting times". For me an interesting aspect is the weird sense of unreality that I have. I last had this feeling after the 9/11 attacks in 2001.

It is interesting that I never get this feeling while in virtual reality, even though there of course it is definitely not real. So this feeling is not to do with the means of perception, but about what is perceived.

In VR we distinguish between 'being there' and 'plausibility'. Plausibility is the illusion you have that events are real (even though you know that they are not). However, when Plausibility breaks it just leads to a disinterest in what is happening, it does not lead to the sense of unreality that the breakdown of norms in the real world seems to cause.

The breakdown of 'normality' seems to lead to this sense of **derealisation**:
<https://en.wikipedia.org/wiki/Derealization>

Is it possible to have a **Plausible** virtual reality which also **induces derealisation** in the virtual world?

Last year some time Facebook approached us because they were interested in doing studies of derealisation, and wondered whether VR would cause it. I think I realise now that if in VR we could induce a sense of derealisation, then this is a kind of proof that it is not VR itself that causes derealisation, but only the circumstances that would be depicted in VR.

Mel

Day 4 - getting into the rhythm

Mel Slater <melslater@gmail.com>

Mon, 16
Mar,
11:42

to Event-lab

Hi,
I hope that everyone is ok.
It will be difficult to avoid falling into "I'm at home routines".
Every day we might wake up that 15 minutes later.
After breakfast, time for a coffee and a snack.
Let's go for a walk to clear my head - oh no I can't or I will get fined.
OK back to work - errr what was I doing? Think I need a coffee to figure it out ...
Wait! It's lunch time.
Phew, that was a heavy lunch, I need my siesta.
Oh no it's raining I can't go out.
(Forgot I can't go out anyway!).

OK, where was I?

Oh yes, I was looking for a reference. What paper was it? I'll have to look in my notes to check. Oh last entry was 2 weeks ago.

Time for coffee.

OK I better start now....
I wonder what's going on on twitter

OK I better start now. But it's dinner time... OK I'll get up really early tomorrow, I mean it this time!

Take care, and wash your hands after reading this.



Mel

Day 5 - we are doing good

Mel Slater <melslater@gmail.com>

Tue, 17
Mar,
10:29

to Event-lab

Hi,

I hope everyone is doing well, and if you need some support please let me know.

I was thinking that in the Event Lab we have done well, not just in papers. Of course papers are critical, because it is what allows us to survive in the academic system (no papers, no grants, no Event Lab).

However, it is deeper than that. We have, I think, done things that are useful for society, all around the idea of virtual embodiment.

* right now the Justice Department is using the domestic violence application as part of the attempt to educate domestic violence offenders. Tania has even been working in a prison in Tarragona. This is work that came originally out of the VERE project and led by Mavi.

* right now the embodiment ideas are being used in hospital trials in relation to patients with bone fractures and stroke. Again this is work led by Mavi originally from the VERE project.

* Virtual Bodyworks has just won a big EU grant to use the body swapping system (talk to yourself) in the context of helping people with obesity. The other partners are Beatrice de Gelder, Doron Friedman, and a local hospital. This will be led by me and Mavi. This research arose from the TRAVERSE and Psi projects originally, and is continuing in MoTIVE.

* Our approach is likely to be used to combat racial bias amongst police in the US.

* Facebook are now using a method for assessing presence from a paper that came out of our lab in the PRESENCCIA project. (See the paper <https://research.fb.com/publications/evaluating-virtual-reality-experiences-through-participant-choices/>)

So our work is worth it, even if we have to do it at home!

Best wishes to everyone

Mel

Day 6 - you are better than you think!

Mel Slater <melslater@gmail.com>

Wed, 18
Mar,
10:55

to Event-lab

hi,

I hope everyone is well and dealing with the challenge of our new situation.

Today we had a new paper published (congratulations Solène)

<https://www.frontiersin.org/articles/10.3389/frobt.2020.00031/full>

which shows that people prefer their own actual bodies compared to their ideal body or the body that they think they have.

However, *this only applies when they see those three bodies from outside* (3rd person perspective). When they consider this from the 1st person perspective then it doesn't apply.

I wonder if this goes beyond simply our body shape. When we consider our lives many of us might think that we are not as good as our 'ideal', not as good as we would like to be. But I think if we would consider ourselves from the point of view of someone else (3rd person perspective) it might be quite different - that we would choose our own actual life compared to the ideal (but only if we see this as if it were the life of another person).

The last few days I've had to write something about my own work. It was very difficult, and I decided I'd done nothing much. Then I used ConVRself on myself (the one where you swap bodies and talk to yourself) and from the perspective of someone else I was able to break through this block, and write something objectively as if I were reviewing another person rather than myself.

Thanks everyone for your comments, let's keep our great work going! The creation of the Event Lab has turned out to be a very special event!

Keep on fighting!

Mel

Day 7 - taking steps

Mel Slater <melslater@gmail.com>

Thu, 19
Mar,
11:18

to Event-lab

Hi,

Normally I do about 10K steps per day + other exercises in the morning. Now of course I do very few steps per day. It is obviously important to maintain a level of exercise.

I find this approach quite inspiring -

<https://www.youtube.com/watch?v=eD9synomcZo>

Or this with a small class:

<https://www.youtube.com/watch?v=zVwTHVn7YgM>

I would prefer to be doing it with other people, and see the teacher directly in the same space as me. So we have been talking to use the MoTIVE vision techniques where we extract 3D shape and movement from video and photos, and bring the exercises directly into our home. With a Quest it is possible, or later when they become cheaper, an augmented reality system.

I'm re-learning Karate Katas,

<https://www.youtube.com/watch?v=CmYCPpus1vs>

again it would be fabulous to have the teacher in front of you in the same space, and you could freeze motion and walk around him to get the posture and movement more accurately.

About the Quest, an important thing missing is tracking of the feet. Typically the virtual environment is bigger than the real space in which you're located. Many years ago I invented a method called 'walking-in-place' where you walked on the spot, and then were moved forward in the environment. We didn't have foot tracking then either, but we built a neural network that based on head movements would predict whether you were walking in place or not. These days I guess the neural network could be much better than it was in those days, and also take into account hand movements.

The paper was called '[taking steps ...](#)'

Mel

Preview YouTube video intenSati Workout - Today I commit (10 min)



Preview YouTube video intenSati Workout - Stronger today (10 min)



Preview YouTube video 4 Kata Heian Yondan Shotokan Karate Hirokazu Kanazawa



Day 8 - I had a dream

Mel Slater <melslater@gmail.com>

Fri, 20
Mar,
11:03

to Event-lab

Hi,
Last night I had the strangest dream.

I dreamt I was walking out of the building in which we live. That's it.
It was amazing.

I've not actually been out for 10 days.

I don't subscribe to Freud's theory of dreams as wish fulfilment, they are far more complex than that. But part of what Freud wrote I think is correct from my personal experience, that dreams reflect what's been going on in our minds, just below the surface, that you're partly aware of, if you think about it, but mostly you're not quite aware of your thoughts in a very conscious way. Like a thought may fly across your mind, too fast for you to catch it.

A few weeks ago if someone had told me that I would get all excited about going out into the street I would have told them they were crazy. We don't appreciate what we have until we lose it. Although consciously I don't feel confined. I guess some part of my unconscious is thinking: What's going on here?

Maybe the Unconscious is something like how VR operates. When we are in VR we know it is not true. However, we respond as if it were. Our brain, at some level, does not know about virtual reality, it just responds. Similarly, our Unconscious operates at a very low level, it is not aware of higher order things (like the coronavirus and its effects) but simply thinks - hey man, we're stuck in doors here, where's the sunlight?

For some reason this reminds me of Woody Allen's profound take on how the brain really works:

https://www.youtube.com/watch?v=_xcKvNwynPM

Best wishes to all.
Mel

Attachments area
Preview YouTube video woody allen



Día 9 - ¡La lucha comienza!

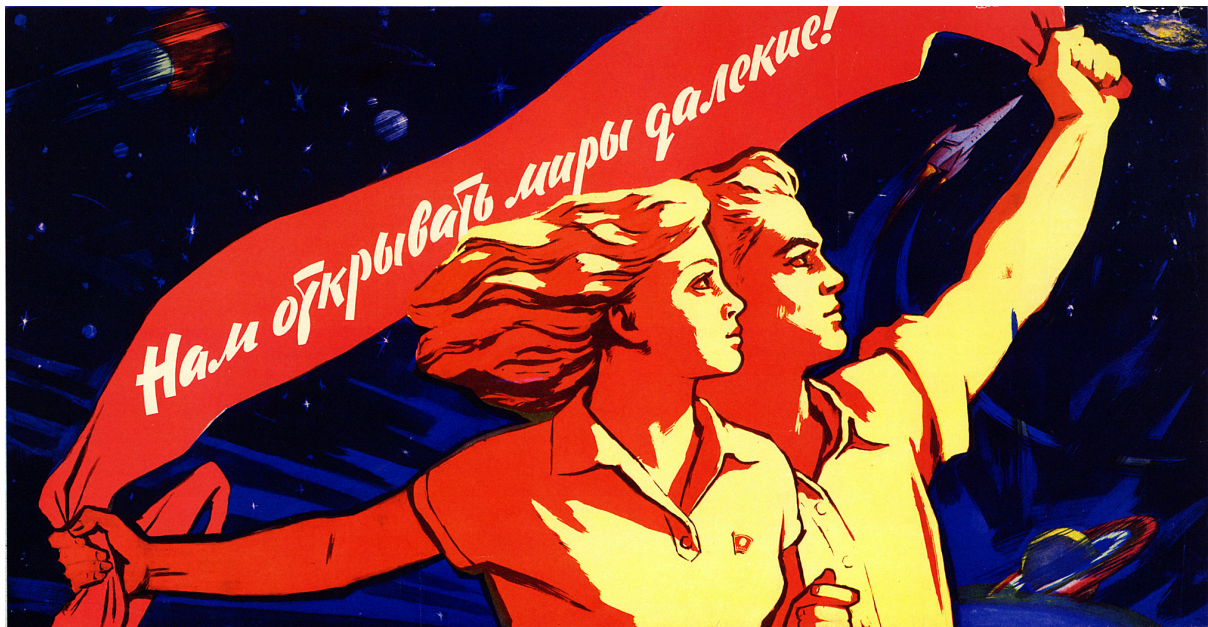
I mean DAY 11 !

Mel Slater <melslater@gmail.com>

Mon, 23
Mar,
09:40

to Event-lab

Hi,
¡La lucha comienza!



The fight back begins!
(sounds better in Spanish).

This could go on for a year.
We cannot just let it overwhelm us, no way!

So let's start now trying to get back to some normality. Obviously we cannot meet, and I assume that the programming side can go on more or less as normal, and I expect that you are having continual discussions about this as normal.

However, we are missing on experiments.

I think that there are enough people out there with Quests that we can start running experiments 'in the wild'. **We should do one soon** as a test case.

These are some issues to consider:

- (1) security - we don't want people taking our software for their own purposes.
- (2) people taking it seriously - if they do their exposure at home, we have no control over whether they are taking it seriously or messing around.
- (3) expectations - people with home HMDs will be used to playing games with probably a high level of sophistication and rendering quality (though this is not true for many things I have seen on the Quest).
- (4) delivery - I guess without our software being in the app store the only way they can get it onto their Quest is to explicitly upload it from their computer into 'Unknown Sources' (maybe there are other ways?).
- (5) We want a good candidate for the first test experiment, ideally something for which we already have ethics approval, and which takes the minimum intervention by the experimenter - eg a version of the multi-choice experiment.

I would like to have a video meeting on Wednesday at 12.00. It will be a MoTIVE meeting, but if anyone else wants to join, please reply to this email.

Que comenci la lluita!

Mel

day 12 - things will never be the same!

Mel Slater <melslater@gmail.com>

Tue, 24
Mar,
11:07

to Event-lab

Hi,
I hope you're doing well.

If we think that after all this is over then things are just going to go back to normal as if nothing happened then we will be very wrong.

We are in transition between two worlds. We know the one we just left, but we don't know the new one yet.

On the political front I'm sure that the authoritarian leaders (the 'strong men of the people') will try to use this opportunity to foster racism and more extremist ideology and actions. Salvini was already doing it weeks ago, and Trump refers continually to the "Chinese virus". Will people see through them, and see them for the liars and criminals that they are or will they just start to look out of place and stupid? I heard that Bolsanaro is still insisting that there is no virus, and won't take measures, but even the gangs in the Favelas are imposing lock-downs to try to protect the people.

As far as our research is concerned, how relevant will it still be? How can we turn it towards the world we are entering? It's very difficult because we don't know that world yet. We might think that the important thing is shared virtual reality or shared AR so that people can meet virtually rather than physically, but maybe that's the wrong move because these times of restrictions won't last forever - going that way could be short term. We don't know.

I'm sure that the EU will have special calls relating the new world. We have to make sure that our work is still relevant. We need to brainstorm on possibilities.

Remember the positive things that are happening:

- * hitherto impossible ones - like the whole of IEEE VR with 0000s of people is taking place entirely online. Will they ever go back to physical meetings every single year?
- * people are finding new forms of creativity, you see it online everywhere. Jokes are everywhere. It is a time of huge creative change.
- * the environment is probably better than it has been in decades. Will we go back to how it was before? What are the implications of that?

* children are learning at home (at least some!) under their own pace rather than sticking to the rigid formulae that are needed in schools to control 30 children simultaneously in one class.

So how is our kind of research going to be relevant in this new world?

Let's have a brainstorming about this either late this week or early next week.

Remember tomorrow we will have a MoTIVE meeting at 12.00, specifically to discuss remote experiments. Anyone else who wants to join please email me.

Live long and prosper!

Mel



day 13 - the negative effects of quarantine

Mel Slater <melslater@gmail.com>

Wed, 25
Mar,
11:07

to Event-lab

Hi,

I heard today that after the SARS outbreak there were serious mental health issues amongst the populations affected.

I found this very recent paper

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)30460-8/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30460-8/fulltext)

Please go through it. We really need to consider how our research can help.

One particular heading caught my eye:

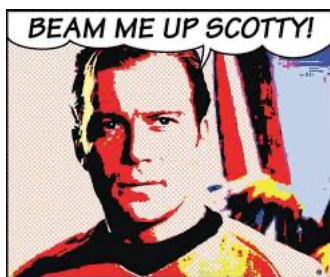
"Reduce the boredom and improve the communication"

When can we put people into virtual concerts? - even if it is on a screen rather than in a HMD.

What I said yesterday about the world will be different - one critical way it will be different is the mental health aspect, ranging from anxiety through to post traumatic stress disorder.

As I said we should have a brainstorming meeting this week or early next to discuss this.

This time I feel like saying:



Mel

Day 14 - the abstract society

Mel Slater <melslater@gmail.com>

Thu, 26
Mar,
11:08

to Event-lab

Hi

I hope you are doing very well.

'... an open society ... may ... lose the character of a concrete group of men, or of a system of such real groups ... We could conceive of a society in which men practically never meet face to face - in which all business is conducted by individuals in isolation who communicate by typed letters or by telegrams, and who go about in closed motor cars.... Now the interesting point is that our modern society resembles in many of its aspects such a completely abstract society.'

([K. Popper](#), The Open Society and its Enemies, Vol. I, 1945).

It seems that the Abstract Society has arrived, not over years, not over decades, but suddenly it is here with us now, almost overnight. You've probably heard this next one recently: "There are decades where nothing happens; and there are weeks where decades happen", [Lenin](#).

Can you remember what life was like a few weeks ago? It seems dreamlike to me for sure. Want a cup of coffee? Let's go to the bar. Now an impossible dream, almost all over the world.

What Marxists dreamed of for years has arrived - we are in a Revolutionary Situation. Right wing governments are nationalising whole sectors of industry, in the UK they are paying the wages of workers to stay at home up to 80% of 2500 pounds (about 2800€) per month. The idea of a Universal Wage is being seriously discussed. It is moving towards Marx's goal "From each according to his ability to each according to his needs".

It is a strange paradox, since at the same time as society is becoming socialised, society has become individualised (we are not out dancing in the streets at this Revolution but we are at home!). It's incredible.

All kinds of new initiatives are spring up. But they are being done remotely. New forms of organisation are emerging. But no one has face-to-face meetings. There is a lunatic in charge of the most powerful country in the world, who wants "the Churches full on Easter Sunday" - I think he may be moving into the realm of irrelevance (or on the other hand could be very dangerous). It is clear that China will emerge as the world leader after this.

We should think what this means for us and our futures both at the personal level, and what role the Event Lab is going to play in these momentous events.

"Yesterday I was clever, so I wanted to change the world. Today I am wise, so I am changing myself." [Rumi](#)

take care
Mel

Day 15 - through the window

Mel Slater <melslater@gmail.com>

Fri, 27
Mar,
10:29

to Event-lab, bcc: Sameer

"...To those sitting inside a car, outside reality appears slightly distant, the other side of a barrier or screen materialised by the glass. We perceive external reality, the world outside the car, as "another reality", another mode of reality, not immediately continuous with the reality inside the car. The proof of this discontinuity is the uneasy feeling that overwhelms us when we suddenly roll down the windowpane and allow external reality to strike us with the proximity of its material presence. Our uneasiness consists in the sudden experience of how close really is what the windowpane, serving as a kind of protective screen, kept at a safe distance. But when we are safely inside the car, behind the closed windows, the external objects are, so to speak, transposed into another mode. They appear to be fundamentally "unreal", as if their reality has been suspended, put in parenthesis - in short, they appear as a kind of cinematic reality projected onto the screen of the windowpane..."

Slavoj Žižek (1991) An Introduction to Jacques Lacan Through Popular Culture.

That is how the majority of us are - perceiving the currently harsh external reality through the windows of our homes. However, when we lower the window or go on the balcony only a relatively pleasant reality comes through, the sunshine, one or two people walking their dogs in the street, the odd car going by, or the nightly pageant of applause for the health service workers and (hopefully) all the other emergency workers.

There is another level of window - perceiving the world through our screens, the never ending stream of news, tweets, Facebook messages, alerts, live coverage. It is also one world because we are united in focus on this one event, it has the potential to be a unifier (or a destroyer). There is a very interesting article on this aspect by Yuval Harari speculating on [the world after coronavirus](#).

In Virtual Reality we add yet another kind of window, but this is a paradoxical one. It is a window for sure, but it is a window that brings us **into a world** rather than requiring us to **look in from the outside**. What we need is a VR that can be real-time live with full head-tracking, and the possibility of movement in and through the remote real world on the other side of the screens. So if we want to visit someone, maybe in hospital, we can really 'be there' in real-time and not only that but they can see us there, through augmented reality.

We tried to do this in [a project a few years ago](#), where a person in VR would be represented by a physical remote robot, and the person would see the real world through the eyes of the robot, and of course the robot would have a physical presence in the real world and move according to the actions of the remote traveller. [It did have the advantage that you could be in several places almost simultaneously](#). But doing it through robotics is very cumbersome and expensive.

So how could we have real-time physical remote presence through low cost VR/AR?
Of course this is something that Facebook is working on. Solutions welcome!

If you're interested in where I'm remembering the quotes above from it is from [an early paper on presence](#).

“I think boredom is the beginning of every authentic act. (...) Boredom opens up the space, for new engagements. Without boredom, no creativity. If you are not bored, you just stupidly enjoy the situation in which you are.”

– **Slavoj Žižek**

day 18 - how fast reality changes

Mel Slater <melslater@gmail.com>

Mon, 30
Mar,
11:24

to Event-lab

hi,

Yesterday I was watching an episode of a TV series set in modern times. I was horrified. I saw people gathering together in bars and clubs. I saw people going to the airport and taking a plane. People visiting a concert, musicians all playing together in the same physical space. It was incredible.

It would be like if a few weeks ago I had watched a movie about say the 16th century and saw the lack of hygiene that was normal in those days.

Things change so fast. I was surprised at my own surprise. But we tend to adapt quickly to new circumstances. I was recently reading a book by the psychologist [Viktor Frankl \(Man's Search for Meaning\)](#) the first part of which is about his life in a concentration camp. Even there some kind of 'normality' was established, amidst the horror. (I recommend the book, he has a very interesting view of psychotherapy). (By the way even the title of the book illustrates the point - in the 1940s you could say quite normally '**man's** search for meaning'. This shocks me a bit today because we would not say that, referring to humanity only as 'man'. However, times change).

When this is over, and people venture out of their homes for the first time probably in months, going on public transport, being surrounded by lots of people at work, going to cafes and bars, going to the movies, etc - this will be a fantastic relief, but also a profound shock, maybe too much for some. Will there be a surge in cases of [agoraphobia](#)?

Meanwhile we can think about this immediate future, plan for it, prepare for it, and also think about the longer term consequences, and how this is going to change how society functions.

<https://www.youtube.com/watch?v=QcxWxNO8idc>

Mel

Attachments area

Preview YouTube video Great Star Trek Quote: Wanting and having



Day 19 - the times they are a changin'

Mel Slater <melslater@gmail.com>

Tue, 31
Mar,
11:31

to Event-lab

hi,

This is an unusual time where we can think about things and our lives. Perhaps things that seemed really important before now don't seem that way, or the other way round that things that did not seem important or special now seem very special.

This applies not only to things, but to relationships. Friends who I have not heard of for years have been contacting me, worrying about the situation in Spain (though from my point of view, where they are - UK, US - the situation has the potential to be worse). I have contacted people I have not thought of for years, actually even some people whom I don't especially like, to check up on them, and see if they are ok.

A situation like this puts everything into perspective. It is a time to reflect.

One paradoxical aspect is that in Catalunya they are letting the prisoners out of jail, while everyone is under house arrest. Try to think - if someone told you this a few weeks ago, would you have believed them?

"Not to expect the unexpected is the natural failure of those who plan" (I Ching).

"No esperar lo inesperado es el fracaso natural de quienes planean."

https://www.youtube.com/watch?v=e7qQ6_RV4VQ

Mel

Attachments area

Preview YouTube video Bob Dylan The Times They Are A Changin' 1964



Day 20 - the importance of models

Mel Slater <melslater@gmail.com>

Wed, 1
Apr,
11:49

to Event-lab

hi,

One thing you may have noticed in the news is that there are often references to models. I think that until recently President Trump thought that they were women modelling fashion, but from his press conference yesterday, I think that even he has realised that they are mathematical/statistical models regarding the progression of COVID-19 through the world.

A famous one that many countries use is <http://www.imperial.ac.uk/mrc-global-infectious-disease-analysis/covid-19/> which employs a " semi-mechanistic Bayesian hierarchical model to attempt to infer the impact of these interventions across 11 European countries."

Grim reading: "The proportion of the population infected to date – the attack rate - is estimated to be highest in Spain followed by Italy and lowest in Germany and Norway, reflecting the relative stages of the epidemics." But "It is therefore critical that the current interventions remain in place and trends in cases and deaths are closely monitored in the coming days and weeks to provide reassurance that transmission of SARS-Cov-2 is slowing."

This morning I saw online a bit of the recording of the Trump Press Conference yesterday where a senior medical doctor (not Dr Fauci) completely misrepresented a 'confidence interval'. She showed a graph of likely new infections, and there was a shaded area around the curve which was the 95% confidence interval. As you may know a confidence interval around a mean (average) is an interval that indicates - 'if you run the experiment a large number of times then the true mean will be between the computed confidence interval limits around 95% of the time'. It is therefore not a probability.

This doctor, high up in Trump's team, however, interpreted the interval as a kind of wiggle room, in other words that interventions might push the true mean level somewhere up or down within the interval.

In addition, if her data were from the Imperial model then it is not even a confidence interval but a Bayesian 'credible interval'. In that case it is a probability, but still does not indicate the space in which interventions might be more or less successful. It just says that the probability of the number of infections being between the two limits is 95%. Based on interventions the curve as a whole (and the credible intervals) would move up or down, not within the limits of today's published credible interval.

Let's hope that they are not making policy based on their misunderstanding of the science. For the past few years scientists and experts have been sneered at. Now the cost of that ridiculing of science is coming home. (Dr Fauci himself is under severe attack from the Far Right in the US for emphasising how dangerous this virus is).

¡Learn statistics!

Mel

Day 21 - limits to our reality

Mel Slater <melslater@gmail.com>

Thu, 2
Apr,
10:22

to Event-lab

hi,

Well I never thought I would be quoting Mark Zuckerberg, but here we go.

"Some people say that VR is isolating and antisocial. I actually think its the opposite ... The reality is we all have limits to our reality, places we can't go, people we can't see, things we can't do.... And opening up more of those experiences to all of us - that's not isolating - that's freeing."

I read this today in a tweet by @hmltn, and the full speech is on <https://uploadvr.com/oculus-connect-6-mark-zuckerberg/>.

Using the app called Wander, based on Google Street View, you can visit almost anywhere in the world. I've spent time wandering around the streets I lived as a child, remembering that Mr Bright used to live in that house, Mr Alpert in another house, the strange Zola family lived in another house. I walked to my primary school from home, seeing all the details, even remembering the trees that I passed and that are still there today and events that happened at particular locations! On the other hand I visit one of my favourite spots in the world, the beach at Santa Monica, where there is a long bike path of more than 25Km where many times I've been roller blading, and I can retrace my route.

Also now at home I play table tennis on a full-sized table, in my living room, without having to rearrange all the real furniture. I box with a scary boxer, and knock him out. Yesterday both I and later Olivia spent some time in AltspaceVR with a remotely located friend investigating different worlds.

If I feel I need some advice I can talk with Sigmund Freud at home. Recently I was stuck in some writing and I consulted Dr Brennan Spiegel (who visited us a few months ago) and he helped me out. (Of course in reality both Freud and Spiegel were me, but it didn't feel like that).

Mark Z is completely right. VR can be liberating.

I am very happy to be in such a fantastic group, the Event Lab, who are at the forefront of contributing to this liberating revolution that will change the world.

<https://www.youtube.com/watch?v=BGLGzRXY5Bw>

Me

Attachments area

Preview YouTube video The Beatles - Revolution



Day 22 - a typical day in lockdown

Mel Slater <melslater@gmail.com>

Fri, 3
Apr,
11:44

to Event-lab

Hi,

Time seems to be rushing past very fast. It is already Friday again. For me Sunday will make 4 weeks since I've been outside.

It's very interesting how we fall into a new regime. For me I seem to get up quite late, then I do exercises between 30 minutes and 1 hour. Then get showered etc and have breakfast.

Although I seem to have more and more to do every day, my stress levels have gone down a lot (e.g., blood pressure is now about 110 / 60).

Living with people who are on the same wavelength and who you love of course really helps.

Then I start work, answering emails, and then I do what I'm doing now write this message. The three of us here are essentially doing the same, and no one is complaining. We get glimpses of our neighbours at 8.00 every evening standing on their balconies clapping, and sometimes talk (at a safe distance) with our immediate neighbour - she stands in her door and we stand in ours.

When we get a food delivery (not very often though since Amazon etc are really busy) it is as if some nuclear material has arrived. Wearing masks and gloves we carefully take the material out to the balcony where it sits in the open air for a couple of day (luckily it is cold out). Then before use everything is washed with soap and water (e.g. things like fruit). The food arrival is the highlight of the week, and is the time that makes me wonder if this is a dream, or I accidentally fell into a parallel universe through watching a dystopian science fiction movie.

Although I'm exercising I realised one thing I'm missing a lot is walking. Normally I do about 10K steps per day without trying. Walking around the apartment isn't the same! I'm managing a few hundred steps. If you want to walk in the apartment and you have kids you can try walking with them on an imaginary path, pointing out all the great things they can (imagine) seeing along the way.

There was an interesting interview with Bill Gates:
<https://www.youtube.com/watch?v=iyFT8qXcOrM&t=463s>

I hope everyone has a great weekend.

https://www.youtube.com/channel/UCf9_s9ii6BZ-klpgmtli3WQ

Mel

Attachments area

Preview YouTube video Bill Gates on Fighting Coronavirus | The Daily Social Distancing Show



Day 25 - simplicity

Mel Slater <melslater@gmail.com>

Mon, 6
Apr,
10:09

to Event-lab

Hi,

I was resisting for a long time.

Many people were encouraging me to get the VR game 'Superhot'.

First I resisted because from the title I thought it must be about sex.

Then when I looked into it I saw it was violent, so it wasn't appealing.

Then I realised that there was a free demo so I thought I would try it, since so many people can't be that wrong.

Well, it is amazing.

Glass-like characters are out to get you and you have to defend yourself.

You have to see them coming at you from all directions and you have to stop them.

As someone online wrote "It is the closest to being the star of an action movie without actually being one."

It keeps you alert both mentally and physically.

But the really interesting and innovative part of it is its simplicity.

The characters are essential (in the sense of 'of the essence of what it is to be a human-like character').

They are not real because they are glass-like - so breaking one doesn't result in guilt. They are automatons.

A second very interesting aspect is that the action happens only to the extent that you move. If you stand still then the world stands still. So it is adaptive to your own activity.

The simplicity is a very important part of the experience.

This is something we can learn for our own applications. We can ask: What is the essence of what it is we want to convey? Do we really need everything to be highly realistic, or can we achieve the same outcomes with simplicity? (Seems to me like an interesting experiment).

I hope everyone continues to be well, and remember (Queen of England, 2020):-
https://www.youtube.com/watch?v=HsM_VmN6ytk

Mel

Attachments area

Preview YouTube video Vera Lynn - We'll Meet Again



Day 26 - things are not the way they used to be

Mel Slater <melslater@gmail.com>

Wed, 8
Apr,
10:36

to Event-lab

hi,

I guess we are all trying to recover some normalcy in our every day lives, trying to recreate things as they used to be, keeping going with regular routines.

This is important because it gives us a stability, something to hold on to.

But we are in an extreme situation. Although we continue with our daily routines, things are not the way they seem, and probably there will be a long time before the world recovers some kind of new equilibrium.

So while maintaining a balance of keeping things as they are to some extent, it is also a time to experiment, a time to learn something new for example, or do some different activity. We can't do virtual reality but we can imagine ourselves into the situations of others. How can we help, if at all?

<https://www.youtube.com/watch?v=HiKdnLNThyw>

Signing off for Easter.

I hope you all stay well, fit, strong, and have as great a time as is possible.

Mel

Day 32 - Bayes' Theorem

Mel Slater <melslater@gmail.com>

Tue, 14
Apr,
10:43

to Event-lab

Hi

I hope you had a restful Easter weekend.

The days just flow relentlessly indistinguishably into each other.

I hope that the relaxation of the lockdown will not lead to a further spike in cases in 2-3 weeks time.

Today I'm going to hand over to Dr Brennan Spiegel who visited us last December. He is playing an important role in the Covid-19 debate, and has been emphasising how about 40% of patients demonstrate gastro symptoms.

But most recently he has emphasised the role of Bayes' theorem in interpreting tests for the virus. He operates mostly on Twitter, and he did a series of tweets about this recently, and here it is compiled into one document. It is better to read it on twitter, where he has a lot of other interesting information about the virus.

Since we can no longer shake hands, I have adopted this greeting:-

<https://www.youtube.com/watch?v=lu1qa8N2ID0>

Mel

Attachments area

Preview YouTube video live long and prosper



Da el paso

Tenemos a los mejores especialistas. Somos N°1

Clínica Opción Médica

ABRIR



Brennan Spiegel, MD, MSHS

@BrennanSpiegel



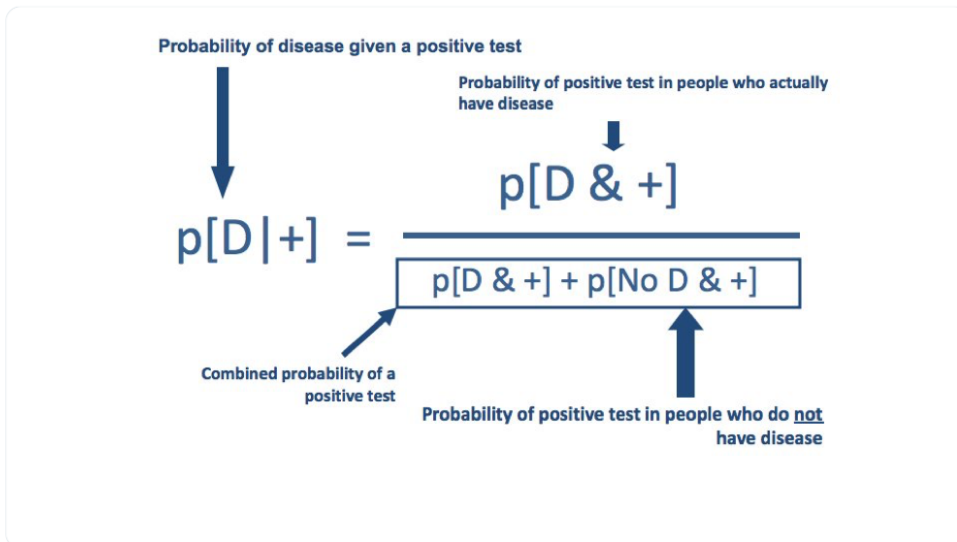
Apr 11th 2020, 5 tweets, 2 min read

Bookmark

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+ My Authors

The equation below has never been more important. It's Bayes' theorem; I teach it to all my students. I'm not hearing much discussion about how to use this equation to diagnose [#COVID19](#). As a result, I'm concerned we are missing cases. In a nutshell, here's how it works... (1/5)



Ad



test 1 road - test 2

test 4

test.com

Day 33 - self-distancing

Mel Slater <melslater@gmail.com>

Wed, 15
Apr,
11:30

to Event-lab

Hi, it seems an appropriate moment to talk about self-distancing. But actually it is a psychological theory that much of our work has made concrete through virtual reality.

Self-distancing theory addresses the problem of emotional regulation. For example, how do people deal with a traumatic event in their lives, or suppress anger and aggression when they are provoked. It considers two strategies in dealing with past events.

- (i) self-immersed from a first person perspective - we remember the event from our own point of view, as it happened.
- (ii) self-distanced - we remember the event as a 'fly on the wall' - a 3rd person perspective, seeing ourselves and our own actions from the outside.

It turns out, not surprisingly, that (ii) results in people being better able to understand what happened, and react in a less emotional way, prevent aggressive attitudes and behaviours.

For those interested a review article is available.

<http://selfcontrol.psych.lsa.umich.edu/wp-content/uploads/2016/12/1-s2.0-S0065260116300338-main-2.pdf>

Of course we have concretely implemented this.

In our most recently published paper ...

<https://www.nature.com/articles/s41598-020-62932-w>

... male subjects were first part of a group of males who sexually harassed a lone female. Then in the second phase they re-experienced the scenario either from the embodied perspective of the woman, or from the embodied perspective of another of the men. One week later they took part in a scenario that tested how aggressive they would be towards a woman, again as part of a group of males. It turned out that those who previously had experienced the scenario from the point of view of the woman were less aggressive than the others.

Our method of conversations with yourself is another example of self-distancing - where the participant explains a problem to Freud and then from Freud's viewpoint sees and hears him/herself explain the problem, and then can engage in a conversation switching back between the two viewpoints.

In most of our papers the Discussion section is difficult because we do things that are interdisciplinary, but self-distancing also called Solomon's Paradox <https://pdfs.semanticscholar.org/799a/d44cb6d51bbf6c14ef8e83d6dc74d083f2af.pdf> is a very useful theory for us.

<https://www.youtube.com/watch?v=mC89VRvmCrQ>

Mel

Day 34 - time running backwards

Mel Slater <melslater@gmail.com>

Thu, 16
Apr,
11:48

to Event-lab

Hi,

Today I hand over first to Woody Allen:

“In my next life I want to live my life backwards. You start out dead and get that out of the way. Then you wake up in an old people's home feeling better every day. You get kicked out for being too healthy, go collect your pension, and then when you start work, you get a gold watch and a party on your first day. You work for 40 years until you're young enough to enjoy your retirement. You party, drink alcohol, and are generally promiscuous, then you are ready for high school. You then go to primary school, you become a kid, you play. You have no responsibilities, you become a baby until you are born. And then you spend your last 9 months floating in luxurious spa-like conditions with central heating and room service on tap, larger quarters every day and then Voila! You finish off as an orgasm!”

– **Woody Allen**

I once read a whole science fiction novel based on this premise, by Philip K. Dick.

<https://www.amazon.com/Counter-Clock-World-Philip-K-Dick/dp/0375719334>

Events take on a different meaning. Think about the Holocaust with time running backwards instead of forwards....

Running time backwards is also part of a psychotherapy technique to overcome bad feelings associated with traumatic events, except that you do it in imagination.

So imagine a VR version of this. How would it be? You take part in some event, and then re-experience that event but with time running backwards. As discussed yesterday you might experience this from a first or third person perspective. Do events running backwards always make sense? Maybe 'time' (which anyway may be an illusion) does run backwards but our brains can only perceive this in the other direction. Maybe as some physicists say there is no time but everything that has and will and could possibly happen is already 'there' and we just navigate a path through it. Perhaps in around 2001 the Universe (or at least the one I am in) suddenly switched onto another really weird path. (Why 2001?).

<https://www.youtube.com/watch?v=2Bb2kdg9mSI>

Mel

Attachments area

Preview YouTube video Woody Allen - Songs from Woody Allen's Films



Day 35 - when you're smiling

Mel Slater <melslater@gmail.com>

Fri, 17
Apr,
11:34

to Event-lab

"In the practically accessible picture, the way we used to put it was like in a virtual world, art is still art, but bullets aren't bullets".

DIGITAL NATIVES. A conversation between virtual reality visionaries Jaron Lanier and Kevin Kelly
(Thanks Justyna and Joan).

Actually I don't fully agree with this. It is true of course that a bullet will not injure someone in VR the way it does in reality (penetrating the body, destroying organs). But it can still injure in various other ways. Being shot in VR can cause psychological damage. I recently experienced a very low level of PTSD from Superhot VR, I couldn't get the images of the bullet/rays coming towards me when I closed my eyes at night, until I found a technique to eliminate this.

As you may know when people try to give a talk in front of this audience, they cannot, they are upset, embarrassed, disturbed. Although it is very far from real, it causes an impact as if it were.



Virtual events can have physical symptoms. Virtual bullets may not cause harm in a physical sense immediately, but maybe they cause physical damage through psychological damage.

On the positive side it is great when you're talking to an entirely virtual character that smiles at you, and is positive towards you.

See Video S1 of this paper

<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0032931#pone.0032931.s005>

The event, even though computer generated, is real because our perceptual, cognitive, emotional system can't but help respond to it as if were, and therefore it is.

Have a great weekend.

<https://www.youtube.com/watch?v=yfsmmk93H3I>

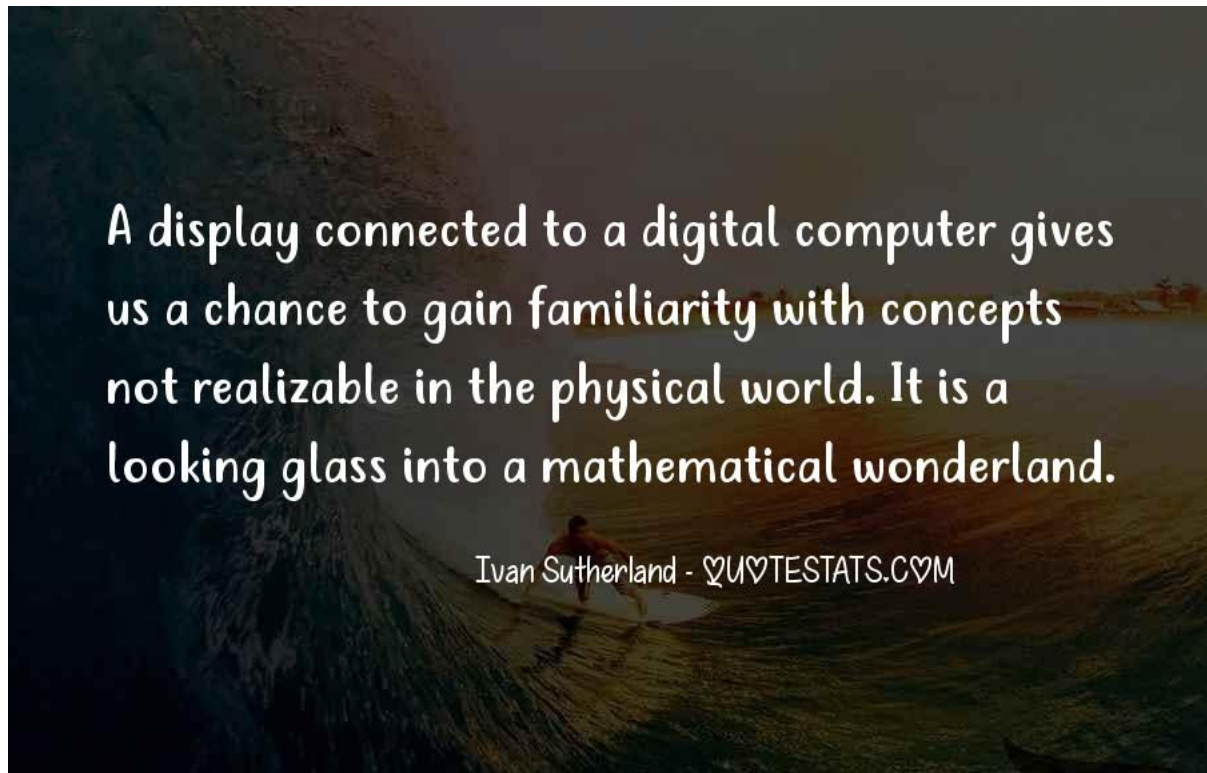
Mel

Attachments area

Preview YouTube video When You're Smiling (The Whole World Smiles With You) - Louis Armstrong



Day 38 - experiencing impossible events



Mel Slater <melslater@gmail.com>

Mon, 20
Apr,
11:05

to Event-lab

Ivan Sutherland produced the first ever VR system in the 1960s with concepts that are the same today - stereo head-mounted display, head tracking, hand tracking. Of course the technology was different - the graphics was based on vector refresh displays (only lines could be drawn), the head mounted display and gloves tracking were through mechanical means, but the concepts were the same as today. Ivan Sutherland is also the 'father' of computer graphics.

The quote above encapsulates my own philosophy of VR, except beyond looking at mathematics. Of course VR has a role to play in simulating 'reality' - e.g., for training. We would not like future pilots to learn to fly their planes in simulations that do not accurately reflect what happens in real airplanes down to the last detail.

But for me, the interest in VR is to go beyond reality, but in a way that reflects back into reality, and improves it. One dimension of this is simply at the experiential level. In VR we can fly, go out of our 'bodies', walk on distant planets or planets that never existed, experience how the world would be with different gravity, and so on. These are examples of experiencing something that is not possible to experience in reality. (Well even that is not quite right, because we are experiencing them in reality, the experiences are real, it is just that the source of the sense perceptions are computer generated).

However, the second dimension is, for me, even more interesting: which is to learn something about reality, to change reality, through experiencing something in VR which is definitely beyond what is possible in reality. I think that using VR for psychological therapy provides a good example. Consider something like the traps that we fall into by talking to ourselves on the inside about some problem - it goes round and round, never ending self-talk that can escalate out of control. Here is an example from an old joke:

Albert lived in a village that was completely covered in snow. He was laying in bed in the early morning thinking about things. He needed a shovel for to clean the front of his house, but he didn't have one. Then he remembered that his friend John had a shovel. So he said to himself: I'll go and ask John to borrow his shovel. Then he thought to himself: what if John won't lend me his shovel? Nah, of course he'll lend me the shovel. ... But what if he won't? Who the hell does he think he is? I got him his job at the office! A great job. A beautiful job. He should be grateful. Of course he'll lend me the shovel. But maybe he won't. That xxyzzz !!! Why, I even introduced him to his wife, I put in a good word for him that way. I've done so many things for that man, and now he won't lend me that damn shovel? He's a disgrace, an ungrateful low life. So Albert jumped out of bed, put on his dressing gown, went out into the snowy street, and banged on the door of the house of John. John opened the door bleary eyed, early in the morning. "Yes?" "You bastard, you won't lend me your shovel! I'm finished with you, don't ever speak to me again, you lousy creep!" And Albert stormed back to his own house, leaving John confused and upset standing by his door.

With our system of body swapping, we externalise the inner self that you talk to and make it as if it were another person. You see yourself from the other person's point of view. It can be humbling. As Josh Rothman in the New Yorker wrote after experiencing this, talking with 'Freud':

"Soon, I fell into a rhythm. Freud and I talked for about twenty minutes. He was insightful; he said things that I'd never said to myself, in ordinary life. When I took off the headset, I was moved. I wanted to tell myself, "Good talk." From his perspective, I'd seemed different: sadder, more ordinary and comprehensible. I told myself to remember that version of me."

<https://www.newyorker.com/magazine/2018/04/02/are-we-already-living-in-virtual-reality>

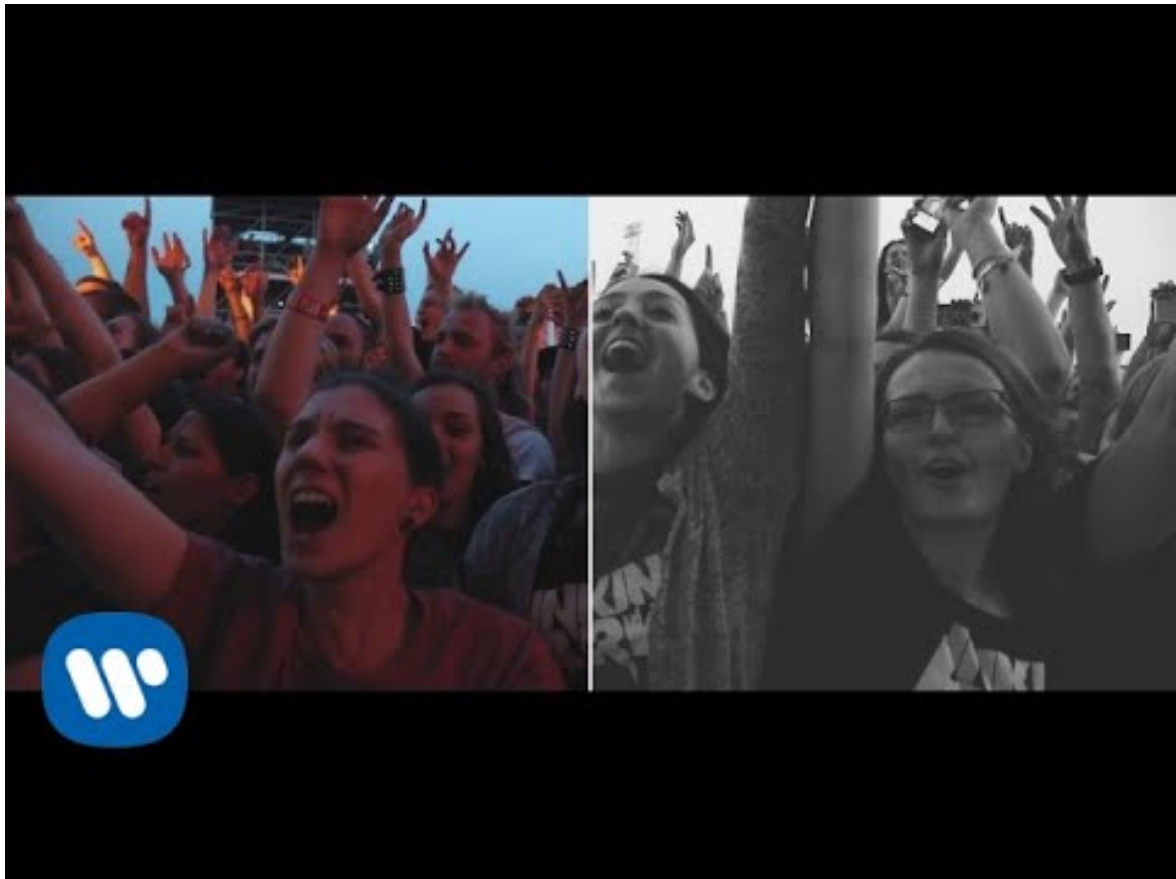
You can do this without VR using the [empty chair technique](#), but I think that with VR it is more concrete.

<https://www.youtube.com/watch?v=lvs68OKOquM>

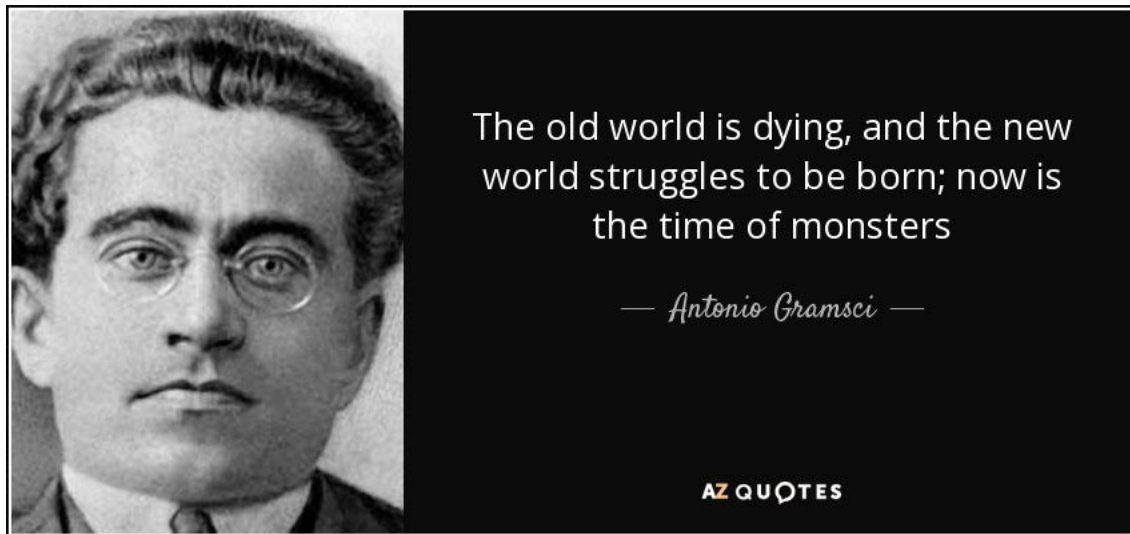
Mel

Attachments area

Preview YouTube video Talking To Myself (Official Video) - Linkin Park



Day 39 - towards a new world



Mel Slater <melslater@gmail.com>

Tue, 21
Apr,
11:19

to Event-lab

[Antonio Gramsci](#) was an Italian intellectual, philosopher and Marxist. He was imprisoned by Mussolini from 1926 to 1937, and he died shortly after his release. Mussolini said that Gramsci was one of the greatest minds in Italy, and therefore had to be silenced.

During his time in prison he wrote notebooks that came to be known as the Prison Notebooks. Although written in a somewhat difficult style, to avoid the scrutiny of the prison authorities, the Notebooks became very famous, and are considered as fundamental in sociological and political thought.

He occurred to me about 10 seconds before I sat down to write this message. I guess it is because we are in a kind of (I think for most of us, if not for everyone) benevolent imprisonment. We can write our Notebooks, and they won't be censored, so we are free to learn new things, think new thoughts and write about them.

The quote above is really true of our times. The old world is certainly dying, a new world is struggling to be born, while the virus - a true monster because it just attacks without thought, emotion, or even any kind of meaning - haunts and hunts us. We don't know how this new world will be, a dystopian one or a kinder one. (If we look in particular about what is going on in Brazil or the United States, or Hungary - we can see that things could go either way).

Gramsci developed the idea of "dual consciousness". He meant it in a sociological sense, people holding two apparently contradictory sets of beliefs: one based on the surrounding culture and the other based on their own life experience. We can extend beyond 'belief' to also behaviour and action. If we do this then our own studies on racial bias provide an illustration of 'dual consciousness'. In tests of *explicit* racial bias in most of our studies white people do not have racist attitudes against black. But when we look at the 'implicit association test', which measures *implicit* biases, those that we are not really aware of but are reflected in our automatic associations and behaviours (black, bad ; white good) then we find a different story. On the average there is implicit racial bias. In Spain from what we have seen in our own studies, there is implicit racial bias. This comes not from within the individual but from the surrounding society from what sociologists call our "[socialisation](#)". Of course in countries like the US this is probably an order of magnitude more pronounced.

VR itself provides another example of a type of "dual consciousness" (very far removed from Gramsci!). In VR we know for sure that we are standing in a room wearing a helmet. But our senses are giving us the illusion that we are somewhere else. Somehow we are able to maintain these two modes of consciousness, though I suspect that at times one is dominant and the other moved to the background. There is presence, but there are also [breaks in presence](#) (video).

The last word also to Antonio Gramsci:

"I'm a pessimist because of intelligence, but an optimist because of will".

"pesimismo de la inteligencia, optimismo de la voluntad"

https://www.youtube.com/watch?v=_9RT2nHD6CQ

Mel

Attachments area

Preview YouTube video Dvořák Symphony No 9 "New World"
Celibidache, Münchner Philharmoniker, 1991



Day 40 – Synchrony

Mel Slater <melslater@gmail.com>

Wed, 22

Apr,

11:37

to Event-lab

Hi,

I do exercises in the morning streaming youtube trainings to the TV, so that I see them on a larger screen.

Normally I like classes where there are other students not just the teacher showing what to do. I find it encouraging and empowering when 'we' are all doing the same exercises together in synchrony - I mean I keep myself in sync with the other students and the teacher doing the exercises.

Such synchrony is very powerful. We know from social psychology and cognitive neuroscience that person-to-person matching behaviour is a sign of harmony between people. In social psychology there is the so-called [Chameleon Effect](#) where it is shown that behavioural (but non-conscious) synchrony enhances and is a sign of rapport between people. This type of harmony can also show up in brain activity, e.g., [between mother and child](#).

In mass situations synchrony enhances [collective harmony](#). Naturally the military use synchrony in order to foster camaraderie amongst the troops.

Dance is an obvious area where synchrony is critical, and there is evidence to suggest that it is positive for [decreasing pain and encouraging social bonding](#).

In [our own work with Beatrice Hasler](#) we found that when people have the same virtual skin colour they will mimic each other's behaviours more often. In our work with [Emma Cohen's group at Oxford](#) we found that synchrony amongst masses of (virtual) people also reinforces social bonding.

In the MoTIVE project which is concerned with concerts, crowd synchrony and with the participant and the music should play an important role.

Coming back to my opening point, I would like to do the exercises in the morning, including Tai Chi and Karate, not by watching the other participants on a TV screen, but to have them all around me, in virtual or augmented reality. The idea is to apply for a project like that based on some of the MoTIVE technology. Suddenly it has become more important to be able to participate in mass activities in the home, because ... we can't leave it.

Here is a very entertaining use of synchrony:

<https://www.youtube.com/watch?v=i05gKtHWjGY>

Mel

Attachments area

Preview YouTube video Queen – Bohemian Rhapsody (Donald Trump Cover)

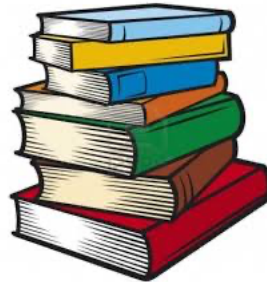
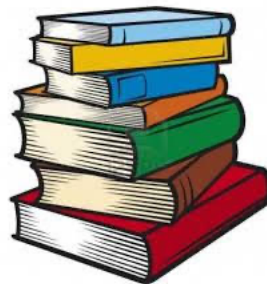


Day 41 - Dia de Sant Jordi

Mel Slater <melslater@gmail.com>

Thu, 23
Apr,
09:08

to Event-lab





<https://www.youtube.com/watch?v=nf0yO3jLX24&t=45s>

Attachments area

Preview YouTube video Symphonic Sardana - Catalonia



Day 42 - 42 or 0.05?

Mel Slater <melslater@gmail.com>

Fri, 24
Apr,
09:39

to Event-lab

hi, as you may know "42" is the answer to everything.

The problem is "What's the question?"

"42" was the answer to "The meaning of life, the Universe and everything?"

But after waiting a very long time for the computer designed to answer that question, the answer it came up with was "42" - and then the designers realised that they didn't have too good a question, so that the answer was incomprehensible.

<https://www.youtube.com/watch?v=aboZctrHfK8>

This is so important for science - to have the right question - which is usually more difficult than interpreting the answers. Unfortunately, what we read in papers is rarely the process that scientists went through in order to get to the publication. The publication is a reconstruction, after the event, a story that is told to make sense of the typical chaos that surrounds a piece of work. You might think from reading the textbooks that there is a formal 'Hypothesis', an experiment or data collection, then a formal test, and then a yes/no answer to the issue posed by the hypothesis. That's how it seems. That's the story according to Psychologists.

According to this the answer is not "42" but "0.05". Since, in the end everything comes down to 0.05. The value 0.049999 is ok the hypothesis is safe. But 0.051 the hypothesis is discarded. If you talk to neuroscientists they don't operate like that in my observation, they are much more exploratory "Let's see what happens in the brain if we do X" is more the approach. After lots of people doing X and X' and X- and X+ and collecting all the observations they might formulate an explicit theory, that then leads to real advancement in science, since the theory will lead to new experiments, and so on.

The whole issue of the validity of science has of course come into sharp focus in the past years attacked by populist politicians all over the world. Now science is suddenly important again - these populist presidents want a vaccine. However, there are exceptions. A certain well-known President last night formulated the Hypothesis that injecting people with disinfectant might cure coronavirus. He said "I don't know, it might or it might not, let's see..." The doctors were horrified. They don't need to do a test on that hypothesis, since they already know for sure what the outcome would be. A dead person is obviously cured of coronavirus.

I prefer the exploratory form of science: Let's see what happens if we do X. In reality there is an underlying theory, but it is implicit. We wouldn't think of manipulating X at all unless, even if we are not aware of it, we have some intuitive theory that makes it

interesting to manipulate X. It's also why I prefer Bayesian statistics. It does not pretend to be 'testing a hypothesis' but really is a way of updating probabilities in the light of new data.

Anyway, thank god it is Friday. Now I can look forward to a weekend ofdoing the same as I did ... Monday to Friday.

<https://www.youtube.com/watch?v=huBQA6xOY08>

Have a nice weekend!

Mel

Attachments area

Preview YouTube video the answer to life, universe and everything



Preview YouTube video Thank God It's Friday



Day 45 - We shall overcome

Mel Slater <melslater@gmail.com>

Mon, 27
Apr,
09:30

to Event-lab

hi,

It might seem as if we are in a never ending crisis and things will never get back to normal.

You might think of something that was not so good that happened in your life in the past. Now you look back on it. You are out of it. It is history. You overcame.

The same will be true of this situation. We will be able to look back on it as that incredible unbelievable event that happened, but then it will be over. We might think - how did we spend our time during that period? Was it productive? Did I do something new that I've never done before? Did I come out of it in some way better than I went in? Did I make contact with people with whom I might have never made contact again apart from the virus?

Even taking note of our dreams could be useful. It is widely reported that people are having intense dreams. Dreams are quite important. If you take notice of them you can learn something about yourself. The other day I had a complicated dream but the thing that struck me most is that a person in it was singing in the street, in public. This was very strange for that person, who would never do something like that. It is a person who I have some problems with (no one in Spain!). And I thought - why did I think of him singing? Then I remembered years ago there was someone else with whom I had a problem (by the way it is rare for me). Then one day, in reality, I saw him singing in a group. He looked so happy. And strangely my view of him turned towards the positive. Then reflecting on this dream, the same happened about the one I had dreamt about - my negative feelings evaporated. Take notice of your dreams. Write them down, and associate with the elements within them, see where the associations lead you. Sometimes it can be very interesting and revealing to find out what's going on in your mind, just below the surface.

Have a great week!

<https://www.youtube.com/watch?v=nM39QUiAsoM>

Mel

Attachments area

Preview YouTube video Joan Baez - We Shall Overcome (BBC Television Theatre, London - June 5, 1965)



Day 46 - Who are you?

Mel Slater <melslater@gmail.com>

Tue, 28
Apr,
10:13

to Event-lab

Hi,

As some of you may know my favourite application of all time is what we now call 'conVRself' - conversations with yourself in VR.

<https://youtu.be/GJ6cAVxQOwo>

It won the "App date" prize in 2015 for being the best VR application in Spain.

<https://www.lavanguardia.com/vida/20151215/30823502131/badi-es-la-mejor-aplicacion-del-ano-segun-the-app-date.html>

(It was then called Freud-me).

Not a week goes by without someone writing to us asking to use it either personally or in their professional work.

There is something special about seeing and interacting with yourself from the outside. As I've mentioned before you get a new perspective. am looking forward to extending this in our new applications being developed now.

These times of isolation could be a special opportunity to experience something like conVRself without the need for VR. We suddenly find ourselves in different circumstances, ones that we have never been in before. You may have noticed changes in yourself as a result of this. We are the product not only of our own personality and psychology, but the interaction of these with our physical and social surroundings. Change the social surroundings and we change ourselves. So it could be useful to reflect on any changes you have seen in yourself recently, and use this as an opportunity to know yourself better.

It has even been observed that pets are behaving differently because of the lockdown:

<https://www.independent.co.uk/life-style/dogs-quarantine-anxiety-barking-cats-behaviour-pets-a9483476.html>

We have the advantage over cats and dogs that we can reflect on our own circumstances, behaviour and thoughts, and we can even think about our own thoughts, and think about thinking about our own thoughts,

It reminds me of the work of [Erving Goffman](#) - he was a sociologist who studied the relationship between self and society. Some of his most famous work was on [Asylums](#), how being in an isolated institution influences the self and also the [presentation of self in everyday life](#), about how social life can be viewed as theatre.

Anyway, I hope you are continuing to progress yourself during the week, and those with children have had the first opportunity to go out over the weekend. I hope it was enjoyable.

<https://www.youtube.com/watch?v=PNbBDrceCy8> [with subtitles]

<https://www.youtube.com/watch?v=oyR3TzIgi-U> [live in concert]

Mel

Attachments area

Preview YouTube video An experimental study of a virtual reality counselling paradigm using embodied self-dialogue



Preview YouTube video The Who - Who Are You (Promo Video)



Preview YouTube video The Who - Who Are You (Live 1989 LA Second Set)



Day 47 - the programmers have all the fun?

Mel Slater <melslater@gmail.com>

Wed, 29
Apr,
10:18

to Event-lab

Hi

Recently I have been following my own advice and have temporarily stopped dealing with and writing papers and doing statistical analysis to learn and do something new. So I am programming. I really do like programming. Of course I still normally do a lot, because of the statistical analysis. But I spent many years of my life doing graphics programming, and teaching it, and this is what I like. The last time I did it was in Alicante when I was on sabbatical at the Institute of Neuroscience, and Mavi and I with the help of Franco Tecchia set up a power wall based lab. I then learned the XVR programming system, and did the first version of the virtual 'rubber hand illusion' which eventually resulted in a [paper](#). I then went on to program solid models of slices of neurons. Since then I've not been able to do graphics/VR programming, since the cost of learning something like Unity is too great in terms of time for me.

However, in these lockdown times I have taken the opportunity to return to this a bit. (I'm sorry for everyone waiting for papers or analysis).

Yes, it is great, I have got my own very simple scenes up in VR after a decade. It is very satisfying. It has a cost: my blood pressure has got a bit higher than it has been. I don't sleep as well. The documentation is very poor, so there is always a struggle to figure out what a method actually does. There are multiple coordinate systems to take into account. 99.5% of the time is simply dealing with 'system' things - something is missing because a library hasn't loaded, and that library hasn't loaded because it relies on another one, but the other one has been upgraded and so is no longer compatible. So really it is true that 0.5% of the time is spent on actual programming, and the rest of the time on trial and error to try to figure out what is going on.

Like yesterday I lost 3 hours, because it turned out that the variable 'v' was somehow intimately connected with another variable, so that when I set v to 0 it set the other variable also to 0. There is no documentation about this and it still remains a mystery. However, solving that allowed me to move on a small step.

Without programming there would be no lab. The programming forms the 'deep structure' of all of our efforts. In the end when we get the result we forget about all the frustration and long hours of work that went into building something. Yet of course it is incredibly rewarding to spend all those hours, build an alternate world, and then step inside it.

<https://www.youtube.com/watch?v=G1fFCnjThCQ>

Mel

Attachments area

Preview YouTube video Hitler is planning to learn a programming language



Day 48 - getting rid of fears

Mel Slater <melslater@gmail.com>

Thu, 30
Apr,
10:48

to Event-lab

The only way to get rid of my fears is to make films about them.



[Alfred Hitchcock](#)

Yesterday was the 40th anniversary of the death of Alfred Hitchcock. He was one of the greatest film directors of all time. I notice that he was born within very few kilometres of where I lived as a child.

It is a coincidence because I think one of his most famous movies [Rear Window \(La Ventana Indiscreta\)](#) was mentioned in our meeting yesterday. It is about a journalist with a broken leg in plaster, forced to stay in his New York apartment, and he sits by the window all day long watching the neighbours in the surrounding apartment blocks, and gets to know the lives of each one. (It seems that NY residents don't typically use curtains on their windows). He notices something suspicious in one of the flats, and the drama unfolds from that. Staying in his apartment for a long time, unable to go out to the street or even walk, is something like our present situation. But at least he was visited by his girl friend [Grace Kelly](#).

We watched Rear Window last night. It is on Movistar (in fact many of his movies are currently available on Movistar, maybe because of the anniversary).

Hitchcock has been described as the Master of Suspense. His movies were always anticipated. As a child I found his movies very scary. One of my favourites is [Vertigo](#), which I must have seen 10 times, and it was re-released not long ago.

So getting rid of fears by making movies about them is an interesting strategy. Hitchcock once said that his biggest fear to be arrested and put in prison for a crime he didn't commit and sure enough he made [a movie about that](#).

It is something like how we might use VR as part of an 'exposure therapy'. This has been used for many years for things like fear of heights. It turns out that the last fear of heights we implemented (in Virtual Bodyworks) was commissioned by a company where the psychiatrist involved has extreme fear of heights. While at UCL we were working on a method to help people overcome their own internal self-criticism, it was clear that one of the main psychologists involved was highly internally self-critical. I noticed this first because when he was explaining this psychological problem to us, he kept unconsciously pointing to himself ("Some people are extremely self-critical on the inside" he said, and all the while he was making pointing gestures towards his own body).

Well, amongst all the things we have done, the only one I personally suffer from is vertigo, but in the past I have been somewhat social phobic, though have never had a fear of public speaking. But I really understand Hitchcock's point.

If you don't know his films he is very much worth following up.

<https://www.youtube.com/watch?v=k7ZuiwDJS9M>

Mel

Attachments area

Preview YouTube video Rear Window Official Trailer #1 - James Stewart, Grace Kelly Movie (1954) HD



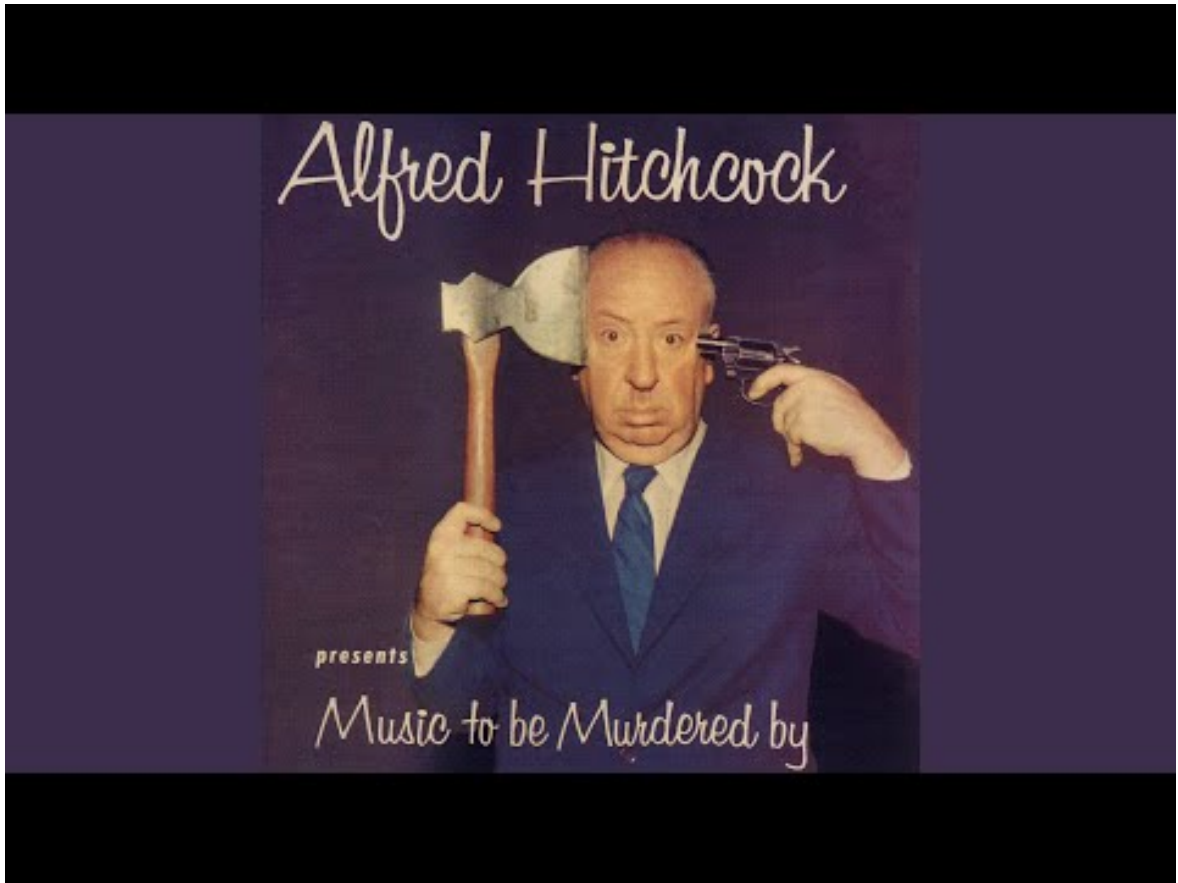
Preview YouTube video Rear Window (1954) Grace Kelly, James Stewart , *HD*



Preview YouTube video Vertigo Official Trailer #1 - (1958) HD



Preview YouTube video Music To Be Murdered By



Day 49 - exercise while working at home

Mel Slater <melslater@gmail.com>

1 May
2020,
09:20

to Event-lab

Happy May Day
Feliz del primero del mayo!

<https://www.youtube.com/watch?v=ntc1dRSbo2U>

Attachments area

Preview YouTube video Woody Allen - "The Excusizer" Office Gym



Day 52 - It's Monday again

Mel Slater <melslater@gmail.com>

Mon, 4
May,
09:26

to Event-lab

hi,

Wow how the time flies. It was just Monday, I mean last Monday, or even the Monday before that. Now it is this Monday, another Monday again.

What to do this week?



I think that this would be a good plan: be awesome in whatever you're doing. Think of all the positive things that have happened in the past few weeks, that wouldn't have happened otherwise. Think of all the positive things that you are going to do and be.

In physics there is a serious in interpretation of quantum theory called the [Many Worlds Interpretation](#). In another parallel universe that person in Wuhan decided not to go to the animal market, or the bat wasn't there that day, and there was no virus. In another parallel Universe the virus started, but it was officially noticed by the authorities and was stopped in time. In another Universe the virus spread, but the governments around the world were all really prepared for it, so nothing really happened. Our parallel selves in those worlds are just carrying on as normal as they have always been. How is that going for them?

This is explored to some extent in an interesting movie called [Another Earth](#). It's worth seeing if you haven't.

Well, have a great and awesome week.

<https://www.youtube.com/watch?v=h81Ojd3d2rY>

Mel

Attachments area

Preview YouTube video The Mamas & The Papas - Monday Monday



Day 53 - out of the body

Mel Slater <melslater@gmail.com>

Tue, 5
May,
10:48

to Event-lab

Hi, I finished reading and evaluating a thesis on using VR to generate out-of-body experiences. This reminded me about how important this was in my own path towards VR.

I was reading books by [Carlos Castaneda](#). He was an anthropologist in LA, who (apparently) worked with a Yaqui Indian sorcerer in Mexico named [Don Juan](#). Don Juan decided to take on Carlos Castaneda as a student and over many years inducted him into the ways of the sorcerer. There were many books published, the first one very academic being the PhD thesis of Castaneda, and the others become more and more surreal. I remember especially liking the third book [A Separate Reality](#).

Castaneda wrote a lot about becoming aware of dreaming while dreaming - lucid dreams. He suggested trying to foster the habit of looking at your hands in the dream, and use that to trigger the lucid dream. Other methods involved becoming critical during awake time, of repeatedly testing "Is this a dream?" so that this habit would also show itself during dreaming.

In our current times testing "Is this a dream?" seems a never-ending process, since if you think about it, this could be a (collective) dream.

I became interested in lucid dreaming, and read widely about it. However, except for extremely short episodes, I was never able to master that.

But one time early in the morning I suddenly found myself out of bed, fully conscious, with my body feeling very strange, and there was a very bright light coming through the door. I felt very heavy but I made my way to the door and there was a woman there, and she said "We didn't expect you just yet". Then vibrations started all over my body, and I was back in bed. It was an out-of-body experience.

I read everything I could about out-of-body experiences, and soon was able to have them regularly. So if I wanted one, I would start to think about it, and I would have one within about 3 weeks. Most of them were very ordinary, nothing happened I was out of my body in the bedroom, feeling very embodied, but able to push my hand through walls, or go out through the window and float down into the garden (where once a cat stared at me looking puzzled). They would only last a few seconds, the beginning and end accompanied by very strong body vibrations.

Then in 1990 I was at a SIGGRAPH conference and had become interested in VR. I was invited by Jaron Lanier's company to have an experience. I put on the head-mounted display, and was very disappointed because I only saw some very fat pixels. Then a voice from outside said "MOVE YOUR HEAD". As soon as I did so I was in a small room with a window to the outside, from where I heard music. I floated over to the window and looked out. There was a blue sea below and a boat. I floated out through the window and was falling slowly towards the boat.

Suddenly I started to feel the same vibrations in my body as when having an out-of-body experience. I thought "I'm not going to have an OBE here at SIGGRAPH in an exhibition hall with thousands of people around" so I stopped it. At the same moment someone shouted "YOUR TIME IS UP". I took off the head-mounted display to see the bright high resolution very colourful and realistic real world.

It is because of that moment, back in SIGGRAPH 1990, in Dallas Texas, that we are all here now. It is what decided me to change research directions and go on the Path of the Warrior - in Virtual Reality. I then quickly got funding to buy a VR system in London, and started the research group with my first postdoc Martin Usoh.

So here we are now in a separate reality, powered originally by an out-of-body experience. Maybe this was ordained by Don Juan himself, or maybe magical things happen when you read magical books.

<https://www.youtube.com/watch?v=exjIR7izakg>

Mel

Attachments area

Preview YouTube video Lucid dreams as a bridge between realities |
Chongtul Rinpoche | TEDxFultonStreet



Day 54 - keep a distance

Mel Slater <melslater@gmail.com>

Wed, 6
May,
09:26

to Event-lab

hi,

As you may know there is a whole field of study in social psychology called 'proxemics'. It is concerned with the distances people naturally maintain from one another. The term was first used by Edward T Hall in a [series of papers](#) in the 1960s. He distinguished between different types of distancing, including public, social, personal and intimate.

- Intimate (from 0 to about 0.5 m),
- Personal (0.5 to 1.2 m),
- Social (1.2 to 3 m), and
- Public (greater than 3 m).

Several studies in virtual reality have been carried out with respect to how much proxemics is maintained in VR. The first was probably by [Jeremy Bailenson et al in 2003](#). Part of proxemics theory and observation is that it varies with skin conductance responses. We carried out a study on this in 2010 ([Llobera et al](#)). One other twist that we did was to assume that proxemics works in VR and then let a reinforcement learning algorithm learn to utilise that fact as an avatar with the task of nudging a person to go to a particular place in the environment (even though they did not know that this was their task). This was successful and published in [Kastanis et al 2012](#).

Proxemics behaviour is automatic, it isn't something we normally think about in most situations. Of course, we notice it when it is broken. If someone comes too close to you in an inappropriate context you become aware of this and would typically take counter measures. Also it varies - for example, the physical closeness to other people on a crowded metro train would be unacceptable in other social situations.

So what is going to happen now? The slogan we hear most of all is "social distancing". Now we have to be acutely aware of how close we are allowed to be with others (people we are not living with). The rule is 2m, which falls between social and public, but closer to public.

We have talked about the use of VR to gradually expose people to being back in crowds. (Well, judging by photos of what happened last weekend, I think that most people don't need a lot of encouragement - but there will certainly be many who have anxiety about it). A prior to such a study is to use VR to examine how much, if it

all, proxemics distances have changed as a result of the crisis. This is something that easily falls in the scope of the MoTIVE project.

My intention is that after I have completed a current piece of work, I will pull together the various strands of what we have been talking about with respect to our response to the crisis and see if there is an opportunity for funding in this area.

<https://www.youtube.com/watch?v=zItCzIO04co>

<https://www.youtube.com/watch?v=IN4AcFzxtDE> (the original).

Mel

Attachments area

Preview YouTube video Keep Your Distance (COVID-19 Parody of "From a Distance" by Bette Midler)



Preview YouTube video Bette Midler - From A Distance (Official Music Video)



Day 55 - reflections on physical presence

Mel Slater <melslater@gmail.com>

Thu, 7
May,
10:57

to Event-lab

Hi,

One of the most important aspects about the lockdown is that people meet each other only online. They are not the same as physical meetings, right?

Of course there are massive differences between video and physical meetings: you're not in the same space, there is no possible way people can enter your personal or intimate space, you can't touch, you can't even look each other in the eyes. If you move around no one is going to be influenced by your movements - you can't bump into someone. You can't detect subtle changes in facial expression, skin colour, sweating etc (at least not to the same extent). The sound is not spatialise.

Now in VR most of those things (except the real feeling of touch) can be overcome. You are in the same space, you can spatially interact. You can invade someone else's space (remember proxemics), you can look at someone in the eyes. Fine tuned facial expressions are more difficult but it is just a question of time.

So suppose there was a perfect shared virtual reality system where everything was visually, spatially, auditorily and haptically indistinguishable from physical reality. In VR you meet with other people and from the sensory viewpoint it cannot be distinguished from reality. Would it be the same as a physical meeting?

I've wanted to do this experiment for years since the BEAMING project. Of course since we cannot reproduce physical reality, for comparison we can downgrade physical reality - e.g., people could view the real world through a see through HMD with the same resolution as the VR one, etc..

So now would the physical meeting and the virtual meeting be the same?

What is this really testing? Is there some unconscious dimension to physical meetings that go beyond what is possible in virtual meetings?

One example could be subtle non-awareness of odour. Let's imagine we can solve that too in the VR.

Still would the meetings be the same?

Maybe there is an exchange at some energetic level that is unknown to science at this time. You know sometimes you meet someone, and instantly you take a dislike or a like towards them, apparently based on nothing. Maybe it is this energy exchange. You feel the 'vibes' of the other. The one time psychoanalyst [Wilhelm Reich](#) believed that there was something called '[orgone energy](#)', a kind of life energy, and he carried out experiments on this. (He died in prison in the US as a result). (Before he went in this highly controversial direction he wrote some really influential works, especially [Character Analysis](#), which went far beyond Freudian psychoanalysis to include how emotions and memories are locked up in the body, and can be released).

So maybe even the sensorily perfect virtual meeting will never be the same as a real physical meeting, because it doesn't capture this life energy. Or maybe there is no such energy and the perfect VR would be just as good as real.

This is actually a question that could be resolved experimentally, one day.

I hope you are well, and that they are not stopping the lockdown too early.

<https://www.youtube.com/watch?v=TUBBGwXx3Vo>

Mel

Attachments area

Preview YouTube video Blondie - (I'm Always Touched By Your)Presence, Dear [BBC]



Day 56 - is it really there?

Mel Slater <melslater@gmail.com>

Fri, 8
May,
10:34

to Event-lab

hi,

There is a theory propounded by Dr [Don Hoffman](#) that objects don't exist when you don't perceive them. See,

<https://www.frontiersin.org/articles/10.3389/fpsyg.2014.00577/full>

For example, when you're not looking at the TV, does it exist? When you're not perceiving the moon is it 'really there'?

He writes:

'Belief in object permanence underlies physicalist theories of the mind-body problem. When Gerald Edelman claimed, for instance, that "There is now a vast amount of empirical evidence to support the idea that

consciousness emerges from the organization and operation of the brain” he assumed that the brain exists when unperceived ([Edelman, 2004](#)). When Francis Crick asserted the “astonishing hypothesis” that “You're nothing but a pack of neurons” he assumed that neurons exist when unperceived ([Crick, 1994](#)).'

What do you think of this?

It is a serious theory of perception and consciousness. Dr Hoffman has some fame in putting forward this theory, including a recent book [The Case Against Reality](#), many appearances in the media including a [Ted talk](#), and so on. Is he just mad?

The fundamental argument is this: we would think that from an evolutionary point of view our survival would be more guaranteed if we perceived the truth about the world, if we perceived things in their reality. However, his argument is that we perceive not the things as they are in reality, but their payoffs (i.e., value for survival). Using evolutionary programming he and colleagues have run simulations where they have artificial creatures, some of whom perceive their world in its true reality, and others who do not perceive the truth, but only the payoffs associated with the world. They find that those who perceive 'reality as it is' don't survive, whereas those who only perceive payoffs do survive.

His theory grows from that into the notion that objects don't exist unless we perceive them, and from that into a whole theory of consciousness - i.e., that consciousness is primary in the universe, and everything else flows from that. Ultimately the philosophy leads to religion.

Why am I interested in this? Well it turns out that this theory is actually quite a good description of how virtual reality operates. If in VR you are looking at a virtual human, it exists in your consciousness as an object. Is what you're looking at really a human? No of course not, its reality is actually something quite different. When you're not looking at the virtual human does it exist? No, not as a virtual human. What do you pay attention to with the virtual human? Not its underlying reality (which consists ultimately of some electrical impulses in the computer) but its payoff - is the virtual human looking at you, angry at you, smiling at you? These are the things that matter.

Where the theory becomes more difficult to follow, is that I said that ultimately the virtual human resolves into electrical impulses in the computer. But does the computer exist if you're not perceiving it? Do the electrical impulses exist if you're not perceiving them?

Finally we may ask - Does Dr Dan Hoffman exist if we are not perceiving him?

Have a nice weekend, if one exists!

https://www.youtube.com/watch?v=IFjttC_AGsU

Mel

Attachments area

Preview YouTube video Do we see reality as it is? | Donald Hoffman



Preview YouTube video Love and Death [Woody Allen] - What if there is no God? [PL]



Day 59 - preparing for a talk

Mel Slater <melslater@gmail.com>

Mon, 11
May,
11:10

to Event-lab

Hi,

I've given probably hundreds of talks in my life.

In spite of being somewhat social phobic in earlier years, I never had a problem about giving talks. My first ever lecture was actually to a large sociology class, and I remember having bad dreams about cats trying to scratch me as a result.

Then I had to manage small class tutorials and I found them more troubling, because they rely on good interaction between the people in the class, and it is very difficult when everyone just sits there and says nothing.

Later I moved into giving talks to larger audiences, like at conferences. Although it is always useful to get a little bit nervous before a talk, the large talks never bothered me at all, the larger the audience the better I felt. The audience becomes a single 'being' with whom the speaker has a connection (or not). You learn to ride on that connection like a bird finds currents in the air in order to fly.

A talk I was most scared about was to a conference organised to mark the opening of the Neuroscience Centre at the Hebrew University of Jerusalem. There were many many famous people there, talking about things that go on in the brain, of which I had no idea. But the day I spoke was on different topics, including AI, and a talk by Amir Amedi (who visited us a few months ago) and also just after me was Yuval Harari. So you can imagine that appearing before a large audience with such famous people, and talking about avatars, was daunting. But apparently it went across well, with the audience bubbling with interest throughout.

The strangest talk I ever gave was last year, March 2019 to the medical VR conference in Los Angeles. I was unable to attend, so I did the talk from home. It was so weird, because I couldn't see them or hear them at all, and I was giving the talk and I had no idea if anyone was even there, watching the talk. Anyway it seemed to work.

Today is another level of weirdness. I will again be giving the talk from home, and i won't see or hear anyone. But not only that, there will be no collective audience. All the audience members will also be in their homes. If they watch from the US they might be watching from bed. So the audience will no longer be a collective but a set of isolated individuals. Maybe the chat on youtube or the Q&A on zoom will build some kind of collective interaction, but let's see.

<https://www.youtube.com/watch?v=nSGgp4-bZQY>

Mel

Attachments area

Preview YouTube video Undergraduate Students Unwittingly Subjected to World's Worst Research Presentation



Day 60 - anger on social media

Mel Slater <melslater@gmail.com>

Tue, 12
May,
11:02

to Event-lab

hi,

Why do people get so angry on social media?

Sometimes I skim through twitter and see some harmless journalist being attacked from all sides. Normally the one being attacked is a woman.

The attacks are horrific with threats of rape, accusations of treason, should be "hanged" etc.

Why?

Do you think that most people would do this face-to-face?

I doubt it.

Maybe it is the anonymity that provides their cover.

Probably face-to-face many people wouldn't do that individually because of various possible real-world consequences.

It seems though they they are more likely to behave this way face-to-face in a group.

But crowds are not always bad. The social psychologist [Mark Levine](#) has done a lot of studies and observations showing the positive value of crowds, who somehow many to regulate their more violent members.

But we know that this doesn't always work. I saw in the Brexit campaign how groups of Brexiteers would hang around outside Parliament and violently abuse anyone that they believed was being 'traitorous' to the Brexit cause.

Crowd behaviour is very complex.

If we can ever get started we have a PhD funded by Facebook to look at this in shared virtual reality, to use Reinforcement Learning to help control bad behaviour. I don't know if it is feasible, but it is an interesting topic.

https://www.youtube.com/watch?v=5D4n_n8l2uk

Mel

Attachments area

Preview YouTube video Trump EXPLODES, Manic-Tweets 52 Times in 60 Minutes

52 CRAZY TRUMP TWEETS IN 1 HOUR

TDPS



Day 61 - what's really happening? what's going to happen?

Mel Slater <melslater@gmail.com>

Wed, 13
May,
10:36

to Event-lab

hi,

I go through my normal routines.

I sit to work every day (yes now it is *every* day since there is no difference between the days).

I don't go out.

It all just carries on day after day.

But sometimes I suddenly think - why am I doing this? And when I think about the answer, it is quite shocking: Because if I go out there is a reasonably high probability that I will get a fatal illness - and every day we are hearing about how horrible it is - attacking the whole body, giving strokes, shutting down major organs, etc. By 'reasonable chance' I mean 1/100 or more. Would you walk over a bridge where 1/100 people fall off to their deaths? Maybe if you were being chased by a bunch of killers you would cross the bridge, but otherwise if you were not in some desperate hurry, I don't think you would cross it.

So staying in doors for as long as it takes seems to be the only option at the moment. And it is ok, provided I don't think about why I'm doing it.

Having watched Devs (HBO) I'm really even more convinced about Parallel Universes. Several years ago I was in a very bad motorcycle accident, but in this Universe I survived only with concussion. But after that time everything started to go really strange (and good) in my life, and that strangeness is continuing today. I think another junction point was 9/11. That was a very weird time, and I wonder how history unfolded in other Universes where it didn't happen or was stopped. I'm sure that this virus is another juncture. Of course in another Universe Boris Johnson did die of coronavirus. What happened then?

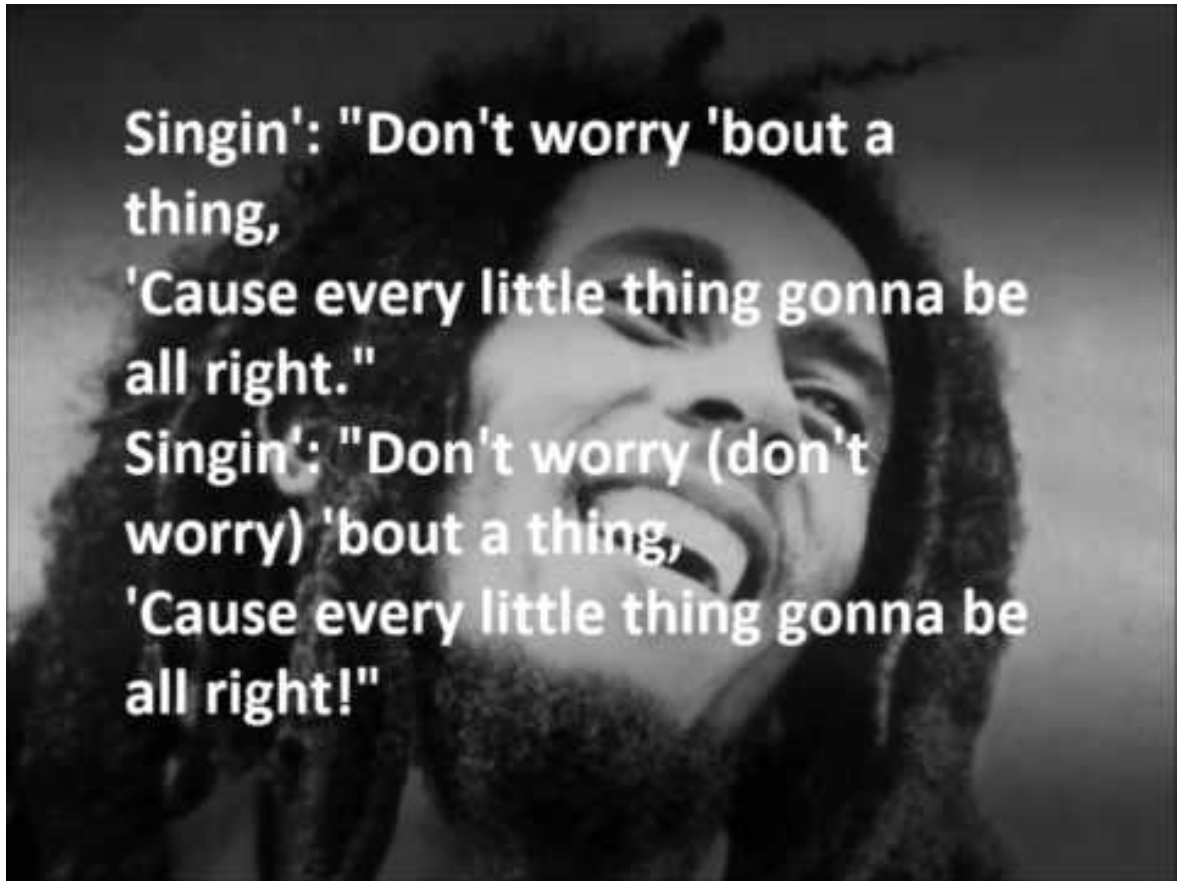
Is the glass half full or half empty? For me it is half full. I think that "everything will be alright" and maybe even better "in the end". But only we don't know when "the end" will be.

<https://www.youtube.com/watch?v=wYCpWbIDKok>

Mel

Attachments area

Preview YouTube video Bob Marley Every Little Thing Is Gonna Be Alright LYRICS



Singin': "Don't worry 'bout a
thing,
'Cause every little thing gonna be
all right."
Singin': "Don't worry (don't
worry) 'bout a thing,
'Cause every little thing gonna be
all right!"



Day 62 - the joys of flying

Mel Slater <melslater@gmail.com>

Thu, 14
May,
10:26

to Event-lab

hi,

There are two major things I'm doing a lot less of: (1) is walking (2) is flying. I actually enjoy flying. The parts I don't like are travelling to the airport (though in Barcelona that is very easy), and going through security (again in Barcelona that is ok compared to most other places). But once I'm the other side of security I enter a kind of "no man's land" - the area that they call in war the space between the two armies which is neutral, not belonging to one side or the other. Life is suspended in that zone, and the same on the airplane itself.

It is a kind of pause in life, it is not home, it is not work, it is not holiday, it is a kind of no where. Of course from no where you can be in contact with the outside world, but everything 'out there' is a bit less real, a bit less pressing.

I guess we are in a similar situation now. We are through the security zone and in the airport, waiting. At least in the airport we know what we are waiting for - the boarding and takeoff. In our current situation we sort of know what we are waiting for - the "end of the coronavirus" - but that is not a sharply defined event. We know when we are in the plane and there is the take-off. But what is the equivalent to the take-off in the coronavirus? Is it the day we get the vaccine?

When at the airport we are used to delays. They are inevitable and typical. On rare occasions the flight is cancelled (not rare when travelling from Paris though). In our current situation we don't know what is normal and what is a delay. We don't even know if there will ever be a take-off, since even the vaccine is not certain.

So at the airport we can hang around, look at the shops, have a coffee, do some work if we can get a wifi connection, and keep checking the information boards. More or less we can do the same now, especially check the information (are the numbers of new cases up or down today?).

As usual I'm looking forward to the take-off, but have no idea where we will be landing, or even if we we will be landing. It is a king of strange and tragic adventure.

<https://www.youtube.com/watch?v=Pv1dWcD328s>

Mel

Attachments area

Preview YouTube video Curb Your Enthusiasm - Larry has to fly coach



Day 63 - Unexpected consequences

Mel Slater <melslater@gmail.com>

Fri, 15
May,
09:40

to Event-lab

Hi,

Unexpected consequences are very interesting. A person or organisation has a particular goal in mind with a particular desired outcome, and they may get that outcome, but as a result or in the process other things happen that were entirely unexpected (and often not desired and negative).

For example, the authorities decided to let children out to the streets for play and exercise and as a result it seems that the covid-19 infection rate has increased substantially amongst them.

<https://diariodeavisos.elespanol.com/canariasenred/el-contagio-de-coronavirus-en-ninos-crece-un-30-desde-que-se-permite-su-paseo/>

(well maybe that's not so unexpected).

In one of our recently published studies, our aim was to reduce aggression of men against women, but in one condition the method actually increased it.

<https://socialsciences.nature.com/users/380924-mel-slater/posts/65635-a-shocking-outcome-in-virtual-reality>

Another one they are talking about is the wearing of masks in this coronavirus. The goal is to protect people, but it may lead to more infections through people thinking that they are protected and therefore taking actions that only increase their chance of infection.

<https://www.fastcompany.com/90501923/scientists-reveal-an-alarming-unintended-consequence-of-wearing-masks>

I like this one especially:

"The term **cobra effect** stems from an anecdote set at the time of British rule of colonial India. The British government was concerned about the number of venomous cobra snakes in Delhi. The government therefore offered a bounty for every dead cobra. Initially this was a successful strategy as large numbers of snakes were killed for the reward. Eventually, however, enterprising persons began to breed cobras for the income. When the government became aware of this, the reward program was scrapped, causing the cobra breeders to set the now-worthless snakes free. As a result, the wild cobra population further increased. The apparent solution for the problem made the situation even worse."

<https://thoughtcatalog.com/michael-koh/2014/01/30-unintended-consequences-of-global-events-that-shaped-where-humanity-is-today/>

So in our experimental studies we should try to think about such unexpected consequences. However, of course it is impossible, because the whole point about unexpected consequences is that they are unexpected.

There is a very famous one in the movie "The Producers". For various reasons some theatre producers wanted to make a Broadway musical that would definitely fail and which would bring in zero income. Their attempt at failure, although at first seemed to be working, actually resulted in a sure hit.

<https://www.youtube.com/watch?v=1zY1orxW8Aw>

Have a great "weekend".

Mel

Attachments area

Preview YouTube video The Producers - Springtime for Hitler and Germany



Day 65 - good morning!

Mel Slater <melslater@gmail.com>

Mon, 18
May,
08:27

to Event-lab

Hi, Good morning.

"It's a **lovely** morning!"

The moral of this song is that if things don't work out one way, try them another way, and that could be even more successful than you dreamed.

<https://www.youtube.com/watch?v=Yu6--WBPBHo>

Have a great week,

Mel

Attachments area

Preview YouTube video Singing in the Rain - Good Morning (1952)



Day 66 - route 66

Mel Slater <melslater@gmail.com>

Tue, 19
May,
10:55

to Event-lab

hi,

Route 66 was the first main highway of America, going from originally from Chicago to Santa Monica (LA). It's the highway of pioneers. It's the highway of mythology, the symbol of American enterprise and daring, originally nearly 4000 Km in length. An amazing engineering and industrial accomplishment.

They say that History is never the product of single individuals, but rather through deep seated processes, and that the main actors in history are just a product of their times. If Hitler hadn't have been born, it would have been someone else.

Now we are living through such momentous times, I wonder about that. I believe that the current President of the US has had a clearly personal effect on the history of the world. He may end up destroying the world as we know it. I've never lived through a period of history anything like this. It is true that there have been strong economic and social factors at work, but a particular individual has had an enormous personal effect, beyond what would have happened with someone else.

Route 66 is both a real highway and an idea. We are on a kind of Route 66 now. Where is it going to lead?

For sure I think that for us as a research group we will never be able to go back to the way we were working before, or at least not for some considerable time. Our own Route 66 is an opportunity it is our road to California. If we can learn how to do our research taking advantage of the possibility that VR/AR equipment will become personal items and that we can do our studies entirely online, this will in the long-run be something that is good, and maybe we can realise results that are more valuable than doing all our studies on UB psychology students. It is a long-shot, with many problems, and more things will work against it than in favour, but my experience is that if you don't try the impossible, you don't even reach the possible.

This is our Route 66.

<https://www.youtube.com/watch?v=tg2EbJy-9dc>

with subtitles

<https://www.youtube.com/watch?v=-KAL5rwxVeg>

Another interpretation:

<https://www.youtube.com/watch?v=BE36QlwwkOc>

Mel

Attachments area

Preview YouTube video Chuck Berry Route 66



Preview YouTube video Route 66 Chuck Berry - Lyrics



Preview YouTube video Rolling Stones - Route 66 1976



Day 67 - objective reality

Mel Slater <melslater@gmail.com>

Wed, 20
May,
10:06

to Event-lab

hi,

The last few days I've been feeling overwhelmed, almost in a panic mode, yet I've done a lot.

It is strange because although I do have more to do this week than previous weeks, it is not **that** much more, I can do it, especially when there is not a lot of difference between different times of the day, or different days: at these times.

So what's going on?

My sleep is bad too which doesn't help, and is unusual for me.

My objective reality says that I have too much to do.
But there is something not quite right about that.

Aha, I know!

I have had sciatica recently (not enough walking), and finally I decided to take pills, which are corticoids. In the past these have worked.

But corticoids seem to affect the brain not just the back. So I have a rushing feeling about everything, though you wouldn't know it from the outside. Things are going at a different speed.

So my change in the sense of my own reality is wholly caused because for 3-4 days I have to take a little white tablet. That's it. Nothing objectively has really changed, only my response to it.

This is so interesting. There have been several times in my life when I was operating out of one reality, only to find that the 'actual' reality was quite different. Sometimes this can lead to funny situations, but that is another story.

So the crucial lesson is --- we can't actually do much about reality. The only thing we can control is our own response to it. This is also what is meant by 'resilience'. Our own reality can be under our own control, in the sense of we can control how we respond to situations and events.

Reality is not necessarily what it seems to be.

<https://www.youtube.com/watch?v=bhCxaE93YOs>

Mel

Attachments area

Preview YouTube video EXPECTATIVA Y REALIDAD - LA ROSALIA,
CON ALTURA - BISSIMO



Day 68 – Eternity

Mel Slater <melslater@gmail.com>

Thu, 21
May,
09:58

to Event-lab

Hi,

When there's a pandemic I guess that it is natural to become more aware of the mortality around us and think about "What does it all mean?". What's Life, Death, the Universe and Everything?

I think we know from my earlier post that the answer is "42".

But this doesn't help us much.

Yesterday I had to prepare another talk for a conference in "Dublin" (of course online) next week, and I decided to include [our experiment on the After-Life](#).

In that view, on death we "take off the head-mounted display" and look back on this life as a virtual life. The problem then becomes - what is death in that higher level plane? Is it a never ending series of virtual environments, where in each one you take off the HMD and are in a higher level dimension? Is Eternity just a never ending VR-sequence?

Here Larry David is discussing the vows for his upcoming wedding with Cheryl, and has an interesting but unfortunate plan:

<https://www.youtube.com/watch?v=DtGcQyKfid8>

Mel

Attachments area

Preview YouTube video Virtual Mortality and Near Death Experience - Short Video with commentary



Preview YouTube video Larry David Wants to be Single in the Afterlife



Day 69 - The future of robotics

Mel Slater <melslater@gmail.com>

Fri, 22
May,
09:38

to Event-lab

hi,

Robotics has a promising future enhanced by coronavirus. Robots can, for example, patrol the streets, visit homes, do dangerous work in hospitals, look after people at risk, and so on.

Here are some interesting examples:-

https://www.youtube.com/watch?v=wYsguXv_HLM

<https://www.youtube.com/watch?v=3VGQQwyLyLI>

https://www.youtube.com/watch?v=a8N4MIOY2_0

and so on.

(Note that all the examples are from Asia).

So robots are clearly in the front-line.

Is there a similar role for VR/AR?

In this example an AR system claims to 'see' coronavirus:

<https://www.youtube.com/watch?v=4er-qch1iiU>

Here is a VR visualisation example:

<https://www.youtube.com/watch?v=d2F3EQD7Z0E>

Here are doctors practising treating coronavirus using VR:

<https://www.youtube.com/watch?v=m2U2I8AlfZs>

Of course VR/AR has a big role to play in lockdown situations of helping to bring people together spatially:

<https://spatial.io/demo/>

(This is now available on the Quest).

We have talked about this a bit before, but we should seriously consider what unique contributions we can make in this area. There are plenty of calls for projects.

Here is the best example of robotics:

https://www.youtube.com/watch?v=g_L-ZoCvMAI

Bon cap de setmana.

Mel

Attachments area

Preview YouTube video Robot dog reminds park goers about social distancing | Coronavirus



Preview YouTube video China: Police robot patrols Shanghai streets amid coronavirus outbreak



Preview YouTube video Coronavirus: Robots wage a war against outbreak in hospitals



Preview YouTube video Glasses Claiming to “See” Coronavirus Symptoms Tested in China



Preview YouTube video Virtual Reality Rendering of a COVID-19 patient's lungs



Preview YouTube video Doctors learn to treat Covid-19 patients in virtual reality in Taiwan



Preview YouTube video Sleeper (Woody Allen, 1973) - Head Change
[sub. español]



Day 72 - Chaos

Mel Slater <melslater@gmail.com>

Mon, 25
May,
12:20

to Event-lab

Hi,

I've been watching the last series of Fauda فوضى (Arabic for Chaos).

<https://en.wikipedia.org/wiki/Fauda>

I've realised that even a TV series can have a tendency to result in a kind of [PTSD](#). Whatever side in the series you're drawn to (or neither side) there is a continuing sense of alarm and threat at a deep level. I think it also has something to do with the music. There's no character in the series with whom one can identify, except maybe the victims on all sides.

I remember when I was about 10 years old I saw something on TV which deeply disturbed me for months, to the extent that I got scared even coming out of school to walk home. I never said a word to anyone, but continued to live in a deep fear for some time that "they" were going to "get me". (it was a program about the atomic bombs that were dropped on Japan at the end of the Second World War, and described the effects of radiation poisoning).

If just a TV series or program can do that, we can imagine how much recent events have affected people on the front line, who in spite of their training, and being used to deal with illness and death, had never experienced anything of that intensity.

VR is at another level to TV, and for sure could induce a profound PTSD. But on the other hand if it can be used to induce PTSD it can also [be used to overcome it](#).

It is another thing we should think of in any contribution we can make to the coronavirus situation.

<https://www.youtube.com/watch?v=8lhjmtgjscA>

Mel

Attachments area

Preview YouTube video FAUDA Soundtrack - Music from the NETFLIX original series, by Gilad Benamram



Day 73 - the physics of VR

Mel Slater <melslater@gmail.com>

Tue, 26
May,
09:48

to Event-lab

Hi,

One of the most influential books I've read is [The Fabric of Reality](#) by physicist David Deutsch. This expounds the [many-worlds interpretation](#) of quantum physics. The book has a superb chapter on virtual reality, and VR figures throughout the book.

For some work I'm doing I was wondering about this: Suppose there were people in VR with no contact with or ability to access the outside world. (How they got there and why they can't access the outside world is not relevant). So they exist in VR, can go about their business etc. Some of them are physicists, and they investigate the laws of physics of their virtual world. Of course they will quickly learn whatever the simple laws are, depending on the properties of the VR. E.g., if they pick up an object and let it go will it fall, or float off sideways, or just stay fixed in place? Is there weight? Momentum, friction etc. Of particular interest is light propagation. If the virtual world is very simple and everything is flat shaded the physicists won't have too much trouble in understanding light. If there is ray tracing or radiosity or light field rendering their work will be harder. But presumably they will discover for themselves things like Gouraud and Phong Shading, the laws of reflection and refraction according to how or if these are implemented in VR.

They will discover pixels. They will find that the model of their own visual system is a rather simple one (e.g., their virtual eyes probably won't have lenses). Basically after study, physicists will eventually learn all the computer graphics techniques, and these including interaction techniques will be laws of their universe. (For example, they would learn that a certain action brings up a menu that floats in the world!). They would, from their first person perspective become experts in the knowledge of how computer graphics, haptics, auditory processing, interactive methods, and VR works. Of course they will express this as properties of their world, not as inventions and techniques (from our perspective being outside their world).

How much deeper can this go?

Will they have any chance to discover the laws of physics in **our world** in which their whole experience is actually embedded? Will they even discover the computer system that is behind their whole world? Will they discover us, who programmed everything that forms their world? There are fundamental limitations to what they can discover.

Now step back to consider our world and apply the same reasoning. Maybe by analogy we are in the same situation as them. What is the deeper reality behind our own physics, that we cannot possibly access because of absolutely inherent limitations?

There is a science fiction book [Millennium](#) that I read some years ago that is worth reading if you're interested in these kinds of things.

Also the Prime TV series [Upload](#) has a funny take on some of this.

Here we are back to Life, The Universe, and Everything.
If you have the Answers please let us know.

<https://www.youtube.com/watch?v=0sCEiSmjcuM>

Mel

Attachments area

Preview YouTube video Quantum Physics Is Everywhere: A Quantum Comedy



Day 74 - conspiracy

Mel Slater <melslater@gmail.com>

Wed, 27
May,
10:54

to Event-lab

hi,

There are very widespread conspiracy theories about coronavirus.

<https://www.disinfo.eu/publications/covid-19-conspiracy-theories-comparative-trends-in-italy-france-and-spain>

These will have serious consequences, since they become intertwined with the anti-vax movement. If ever there is a vaccine it will have to be taken by 60-80% of the population to be effective for population immunity at least for a few months. For example, the antivax movement has led a [resurgence of measles](#) (sarampión) in some countries.

<https://www.psychologytoday.com/gb/blog/psych-unseen/202005/anti-vaccine-and-covid-19-conspiracy-theories-perfect-storm>

I've often wondered how VR might help in combatting conspiracy theories and antivax. I think it is very difficult, even assuming that everyone in the world had a Quest at home. The problem is that if someone is a firm believer in a conspiracy theory, then any attempt to combat is, to that person, a further proof of the conspiracy. We ask someone to try out a particular experience, and then we and the experience itself would become proof that "we are in on" the conspiracy, that we are trying to "cover up the truth". A conspiracy theory is hugely successful once it takes hold, because it has extremely strong self-defence mechanisms. The way it operates is itself very much like a virus.

How could it be combatted? Maybe like a virus there should be a type of 'vaccine' that prevents its spread. I think it would be useless, for example, in the case of antivax to show people the negative consequences of not vaccinating: this would just be incorporated as part of the conspiracy (it would be called 'fake news').

Maybe humour would work. Take a conspiracy theory and take it to more and more absurd conclusions, blow it out of all possible proportions.

But I'm not sure if that could be effective. For example, in the 2016 US election some people really believed that [Hillary Clinton was running a child-abuse network out of a pizza shop in Washington DC](#). This was believed to the extent that there were death threats and shootings against the pizza shop employees.

Maybe the "taking to logical conclusions" and blowing out of proportions might work if the conspiracy theory reflected back on the person who believed it so that it was "proven" that the person themselves were part of the conspiracy!

I see now that Twitter are even explicitly putting "fact check" notices on Donald Trumps Tweets. This is a start. But no doubt it is ... part of the conspiracy to silence The Truth.

<https://www.facebook.com/Prof.Yuval.Noah.Harari/videos/vb.350257731721892/1344723862373898/?type=2&theater>

<https://www.youtube.com/watch?v=eduwBgDcMwY>

Mel

Attachments area

Preview YouTube video Conspiracy Theory Music - Demise of A Nation



Day 75 - it's a sin

Mel Slater <melslater@gmail.com>

Thu, 28
May,
11:03

to Event-lab

Hi,

I still closely follow British politics for two reasons: (1) They can and are taking decisions that will negatively affect my life - Brexit - yes this is still going on, and will worsen in the next few weeks, and at the end of the year UK leaves the EU for real without any deal. Where that will leave UK people in the EU and EU people in the UK I don't know. (2) It is like a pretty good long running TV series, that sometimes goes beyond reality. I don't know if should be classed as a comedy or a tragedy, or these days science fiction.

Here is what has been happening recently. You might find that the script writers have abandoned plausibility and gone over the top with incredible events, but - really - this is what is happening.

There was a 'lockdown' in the UK, not as strict as Spain (e.g., you could go out for a walk) but still very clear. You had to stay at home. If you got sick you had to self-isolate, etc.. You could not leave the area where you lived. Tens of thousands of people have been fined for breaking the rules.

There is a person called Dominic Cummings (unfortunately his very name has triggered porn alarms on Twitter - I will leave you to figure out way) who is the special advisor to the Prime Minister (in effect he runs the country). He is enormously influential. He was the 'brains' behind Vote Leave, and the victory of the Conservatives in the last General Election.

In April the central members of the government including Boris Johnson were falling to covid-19. Dominic Cummings' wife started to get the symptoms. Cummings went home to see her, and **then returned back to the Prime Minister's office** (probably infecting more people). Then he went home again, and decided to put his family (one 4 year old child) in the car and drive 260 miles to the grand estate of his father in Durham. Then while there, the family took a day trip 30 miles away to a castle which happens to be a beauty spot.

This was all discovered by The Guardian and Mirror newspapers who wrote a story about it. The basic question was how was it that one law applied to the people, and another law applied to the Cummings Family?

He eventually gave a Press Conference in the Gardens of 10 Downing Street (the house of the Prime Minister). He explained that he drove the 260 miles so that his elderly parents or perhaps his nieces could look after their 4 year old, because both

he and his wife had covid-19. When asked why he couldn't get local help in London (where several of his family live) he said that it wasn't possible.

When asked about why they had travelled another 30 miles to a beauty spot, he said that they had decided to return to London, but because of covid-19 his eyesight had deteriorated, so he drove the family to the beauty spot in order to **test whether his eyesight was good enough to drive**. The day they did that trip, coincidentally was his wife's birthday.

His wife is a journalist and after they had returned from Durham she wrote a piece describing their **self-isolation in London** (never mentioning that they had been in Durham).

Boris Johnson has refused to sack Cummings saying that it is time to "move on" beyond this incident.

So the script writers have indulged in quite a bit of comedy. The tragedy is that now people in the UK are saying that they will no longer obey the self-isolation and social distancing rules because even government members ignore them. So more people could become infected as a result.

As we near the end of the beginning of this situation, it is worth reflecting on how it has changed all of us. However, it does not seem to have changed British politics, only brought it into sharp relief.

However, the British have started to respond with real humour, the first I have seen since the Brexit disaster. Here is an example:

See the video in this tweet:

<https://twitter.com/davidwalliams/status/1265369085946269703>

<https://www.youtube.com/watch?v=J-4gAetwNkw>

Mel

Attachments area

Preview YouTube video Pet Shop Boys - It's A Sin With Lyrics! HQ!



Day 76 - mirror mirror on the wall

Mel Slater <melslater@gmail.com>

Fri, 29
May,
12:50

to Event-lab

Hi,

I wake up and look in the mirror, and I wonder - who's that guy with the growing Einstein/Afro hair?

I do some tests and move my body and sure enough the one in the mirror moves with me.

So it must be me. Body ownership through multisensory visuomotor synchrony works.

I think it is known that the image we see of ourselves in the mirror is mostly made up of self-image, that we see what we expect to see, and the fact that we see this from first person perspective, from within our own body, helps to reinforce this. We don't see 'objectively' but we see our expectations. When the situation doesn't fit the expectations we may have doubt - so seeing the guy with the wild hair makes me doubt about who it is in the mirror.

Recently Solène had a paper that helps to understand something about all this.
<https://www.frontiersin.org/articles/10.3389/frobt.2020.00031/full>

In VR you can see the body you would like to have (ideal), the body you think you have (self-created), and your real body.

When finally we ask people to choose which they prefer between these three, they are more likely to choose their actual body shape (as measured from the trackers) rather than the ideal body that they had created.

When we see ourselves as another person, from third person perspective, we can then be more objective in assessing what we look like, and how we would like to look. This is very interesting for many different reasons, to do with diet, obesity and body shaming etc, and it would be good if we could carry on with this research.

In fact we can since Virtual Bodyworks is leading a new EU project starting in September which is focussed on using the body swapping technique (conVRself) for tackling obesity.

The Queen in Snow White asks ""Magic mirror on the wall, who is the fairest one of all?" Now we know that the true magic mirror is virtual reality.

Have a great weekend!

<https://www.youtube.com/watch?v=Br0DCCEEBpIY>

https://www.youtube.com/watch?v=O_fmUYyWSyE

Mel

Attachments area

Preview YouTube video Snow White Magic Mirror On The Wall Scene
(English)



Preview YouTube video Marx Brothers mirror scene - Duck soup



Day 79 - it's never too late

Mel Slater <melslater@gmail.com>

Mon, 1
Jun,
08:38

to Event-lab

Hi

I don't know if today is supposed to be a holiday or not, but here I am anyway. Things are getting confusing - in Spain in the last 24 hours 96 new cases, but just in Catalunya alone, 325. This is like something from Quantum Physics again where the part is bigger than the whole, or a strange Relativity Theory where perception of events depends on where you are and how fast you're traveling.

At the beginning of the lockdown we didn't know how long the situation was going to last. Probably many of us, well certainly me, had all sorts of ideas of things that we would do during the lockdown, taking advantage of the new situation.

There is inevitably disappointment, we don't do everything that we planned to do. We don't know when it will be over but we are entering a new phase. I heard some scientists saying that it is now established that during the summer the virus has less chance of spreading, so it might reduce even more soon and even faster, possibly to come back in the autumn or winter. We can't plan, we have to just take things day by day, and keep up with our objectives.

Rather than concentrate on things we have not yet accomplished, ***think about what you have accomplished***. You could be surprised, it is probably quite a lot.

And remember, it's never too late:

<https://www.youtube.com/watch?v=ahFARm2j38c>

Mel

Attachments area

Preview YouTube video GREAT SCENE - The Graduate (finale)



Day 80 - complex numbers

Mel Slater <melslater@gmail.com>

Tue, 2
Jun,
09:49

to Event-lab

hi,

It is strange that the number of mortalities yesterday in Spain was 0. But in Catalunya and Madrid there were 11 each, apart from other places.

Yes, well these numbers are complex.

What do you mean by 'complex'?

Well, you know any number can have a real part and an imaginary part.

Please explain, I don't understand.

*A complex number is of the form $x + i*y$, where i is the imaginary number.*

And?

*So we could say, for example, that the numbers yesterday are of the form $0 + i*11$.*

Huh?

Yes, it is clear the real part is 0 and the imaginary part is 11.

But what's i ?

*Ah well, elementary, i is the square root of -1 , so that $i*i = -1$. It is the imaginary part.*

So you're telling me that the release of figures is now in the form of complex numbers, so when you say 0, you really mean $0 + i*11$ (for example).

Yes, that's the beauty of it. In fact suppose we say that in Madrid there were 11, and say two other areas 12 and 14, then we can switch to Quaternions, and say that the true number is

*$0 + 11*i + 12*j + 14*k$, where each of i , j and k have squares equal to -1 . This is great because in this case it is a pure quaternion with no real part.*

Oh, so that means, if we switch back to just complex numbers, if I remember rightly we can take the complex conjugate $0 - 11*i$, and if we multiply the original number by its conjugate we get a real number again - in this case

$$(0 + 11i) * (0 - 11i) = - 121*i*i = 121.$$

You got it! So in that case the number of deaths is 121, but not really because it is square of the length of the vector.

What?

We can even express it in the form of $r(\cos(\theta) + i\sin(\theta))$.

theta? what's that?

Look as I said it is all very complex.

Another thing that I don't understand is whether I can visit my cousin who lives a few streets away.

Well, that's easy. We have developed a Deep Learning system, based on millions of cases, where we can predict with very high accuracy whether you can visit your cousin. Let me enter your details and your cousin's details into the program. [He takes out his laptop].... Well it says here that you can meet your cousin, provided you both wear masks and keep at least 2 kilometres way from each other, provided it is not Tuesday, but on Wednesday evening there's no problem, provided it's not raining, and you safely social distance by at least 4 hectares.

Hectares?

As I said it is complicated.

https://www.youtube.com/watch?v=_DeIExLcURQ

<https://www.youtube.com/watch?v=nWT4ryHTtjw>

Mel

Attachments area

Preview YouTube video Fizzbin



Preview YouTube video WDR Big Band Complexity



Day 81 - A positive contagion

Mel Slater <melslater@gmail.com>

Wed, 3
Jun,
10:43

to Event-lab

hi,

I could have written today about my views about what's going on in the US with respect to racism. There's a lot to say. We are trying to contribute to reducing racism in our small way, though I do have a direct line to a huge US company and I'm trying to get them to take up some ideas, especially since we have already done some work together on this issue regarding the police. But I'll leave that to another time.

But today I wanted to tell you about one of the most amazing things that happened to me. I was in London on a train going back home. It was the evening, and people had that exhausted sad look after the typical day's work. There were two women in their early twenties sitting opposite me speaking to each other in Portuguese, but from the accent I'm sure they were from Brazil, not Portugal. One of them started laughing about something they were talking about and then the other. In a short time they were into unstoppable giggling, out loud. Whenever they tried to stop it started again, they could not stop.

It attracted attention. I found myself smiling, and then the originally sour looking people around started looking at the girls and smiling too. Then one by one we became infected by the laughter, and couldn't help joining in. It was like a wave that spread through the whole carriage. I remember people wiping their eyes from their tears of laughter. No one knew what they were laughing at. The whole train carriage had been infected, there was no stopping it.

At some point as we were approaching a station the girls stood up because we were arriving at their stop. People starting shouting "No, don't get off" "Stay with us" "Don't leave" -- but of course they got off. The wave of laughter subsided, but people looked quite different to how they did beforehand. I think everyone's lives had been really positively affected by that incident.

Contagious laughter can break out in the most depressing of circumstances. In the 1950s in the Soviet Union and Eastern Europe there was another wave of Show Trials organised by Stalin following those in the 1930s. These show trials consumed and murdered communist leaders in the new East European communist states. It was particularly severe in Czechoslovakia where a whole generation of communist leaders were wiped out. One trial included Otto Šling as a defendant, who was someone high up in the party. During his period in prison there was not enough food so he lost more and more weight. In the trial, while he was confessing to all kinds of ridiculous crimes, he started gesticulating, and his trousers fell down (since they weren't allowed belts, and the trousers didn't fit any more because of the weight

loss). The reports are that he continued his confession while giggling uncontrollably, and this infected the whole court room. Unfortunately, it didn't save him and many others in the same trial from the death sentence.

The [Tanganyika laughter epidemic](#) lasted several days - it was an outbreak in a girls' school - it also started with just two laughing and then spreading uncontrollably throughout the school, except for the teachers. Just reading about it can be infectious.

I would like to see this done in VR. How could it be accomplished? It is a real technical challenge because we would have to reproduce very well the physical and auditory moves that indicate uncontrolled laughing or giggling. If it is done even slightly incorrectly then it would fail the Plausibility test.

Maybe this next one could be done with the video capture technique?

<https://www.youtube.com/watch?v=f6qt7U4NKm8>

<https://www.youtube.com/watch?v=9BAEJyuReWQ>

Mel

Attachments area

Preview YouTube video Best of r/ContagiousLaughter



Preview YouTube video Stan Laurel infectious laughing!



Day 82 - nothing

Mel Slater <melslater@gmail.com>

Thu, 4
Jun,
11:50

to Event-lab

hi,

Queen Marie Antoinette during the French revolution wrote "Nothing" in her diary on the day of the storming of the Bastille.

I was tempted to do the same today.

"Nothing", while the world is falling apart around us. The situation in the US can't be underestimated. Not only a President who is encouraging the military to intervene in the demonstrations, but leading military figures objecting to this. Is severe civil conflict between different parts of the US going to come? Who knows where this can lead.

Somehow [The Handmaid's Tale](#) seems to be coming ever closer.

<https://www.youtube.com/watch?v=WHiG5fHHeYs>

Not only that but if you've seen pictures of the demonstrations, you can see that people are totally ignoring the fact that there is a killer-virus around, and that the situation in the US is particularly bad, and is likely to now spread further and faster. While one country in the world (especially one so important) has the virus, we are all in danger.

The incident with the woman in central park who called the police on a black man is really important since it illustrates the situation.

<https://www.youtube.com/watch?v=HewohE0zYvM&t=25s>

She is probably a very liberal anti-racist person, and she has apologised since. What operates here is implicit bias which is somehow more dangerous than explicit bias. Implicit bias is the bias that we don't know we have. It operates at an unconscious level. But it can lead to biased behaviour. She must have known that had the police turned up and seen a 'vulnerable white woman' being apparently confronted by a seemingly dangerous black man, who would they have believed? She must have known that calling the police in this situation could have been a death sentence for the man, as things might have got out of hand. Consider what happened just a few days later!

I am still optimistic that out of this current state of the world things will get better. How and when are the big questions.

<https://www.youtube.com/watch?v=Lli99OmkPwM>

<https://www.youtube.com/watch?v=P0iOz9xf0zY>

Mel

Attachments area

Preview YouTube video The Handmaid's Tale - S1E3 - the protest



Preview YouTube video Metallica - Nothing Else Matters 2007 Live Video Full HD



Preview YouTube video Shakira - Nothing Else Matters/Despedida Medley (Live from Paris)



Day 83 - unexpected questioning

Mel Slater <melslater@gmail.com>

Fri, 5
Jun,
10:10

to Event-lab

hi,

There are two worrying developments on the scientific front to do with coronavirus. The first is that one of the most prestigious journals in the world has published a study that might be based on fake data. The study has led to changes in policy at the World Health Organisation. This is the study of hydroxychloroquine, which claimed to show that covid-19 patients were at greater risk if they took this drug. It seems that the database on which the paper was based is suspect, being run by a tiny company with no medically qualified staff, containing data that some of the supposedly contributing hospitals have denied is from them. See, for example, <https://www.statnews.com/2020/06/02/top-medical-journals-raise-concerns-about-data-in-two-studies-related-to-covid-19/>

or

<https://www.theguardian.com/world/2020/jun/03/covid-19-surgisphere-who-world-health-organization-hydroxychloroquine>

How is this possible? We do our tiny studies with like 30 people, and we have to upload our data, give details about ethics approvals and so on, and in comparison our studies do not have an impact on the World Health Organisation or similar institutions! It can be argued that data can be faked. But fake or incorrect data can typically be spotted, although maybe that is more difficult when the data runs into the millions of observations. Anyway, this is dangerous because one of the positive things about covid-19 pandemic has been the increasing reliance on science. If that is undermined then we are in deep *something*. Anyway, The Lancet have withdrawn the paper:

<https://www.theguardian.com/world/2020/jun/04/covid-19-lancet-retracts-paper-that-halted-hydroxychloroquine-trials>

See also the analysis in:

<https://www.theguardian.com/commentisfree/2020/jun/05/lancet-had-to-do-one-of-the-biggest-retractions-in-modern-history-how-could-this-happen>

On the other hand at least James Bond is on the side of the angels

<https://www.thetimes.co.uk/article/mi5-believes-coronavirus-came-from-market-mghqw3bxr>

Apparently there are attempts to 'prove' that the coronavirus was deliberately manufactured in the Wuhan lab. The article notes that:

"The British academic involved, Angus Dalgleish, 70, is foundation professor of oncology at St George's Hospital, Tooting, southwest London, and a former Ukip election candidate who played a key role in HIV vaccines."

Ukip is the organisation that fought for 20 years for Brexit and finally achieved it (based on lies). I don't understand the connection between the far right and these issues. The connection is very strong. They argue that (1) the virus doesn't exist and it is fake news (2) it might exist but it is only a "little flu" (3) it exists but is less important than, for example, the numbers of people who drown in their own swimming pools "But we don't shut down the economy for that" (4) it exists and has had a bad impact on the world and it was caused by China.

I mentioned before Antonio Gramsci who argued that people have no problem about holding many contradictory ideas in their head at the same time. This is a good illustration.

It is really worth reading the short section of the article called "Analysis".

To end on some possibly good news "[AstraZeneca doubles capacity for potential Covid-19 vaccine to 2bn doses](#)".

<https://www.youtube.com/watch?v=nSVnZQpl9sw>

Mel

Attachments area

Preview YouTube video Monty Python Foro mundial sub spanish



Day 86 - loving statistical significance

Mel Slater <melslater@gmail.com>

Mon, 8
Jun,
12:37

to Event-lab

hi,

Today I should have been in Verona.

There was to have been a summer course on Bayesian statistics at which I had to give a lecture. I think that some others from the lab were going.

Verona is a beautiful city where I've been before and of course full of history. My other association with it is from the [Twilight](#) series of books, where some momentous events happened with vampires in Verona.

Why is Bayesian statistics becoming more and more important?

One reason is that although the theory has been around for generations it is only in relatively recent years that it has been practically possible to use because of the increase in personal computing power, and the existence of programs that do the

work. Bayesian statistics is basically based on Monte Carlo integration of complex integrals that cannot be solved with closed formulae. The method is called MCMC. So it works through methods that are based on simulation. These methods are infeasible without considerable computing power. But these days we carry considerable computing power in our pockets. The program I use mostly is [Stan](#) with an interface through R, Matlab or Python. The critical thing about Bayesian statistics is that your model simulations have to converge.

The second reason is that traditional statistics, although quite elegant when you know the mathematics behind it, is rather confusing and difficult to understand in its ideas. It is typically called NHST ('null hypothesis significance testing'). It is based on the brilliant work of [Karl Pearson](#) and [Ronald Fisher](#) and the [Neyman-Pearson lemma](#), though the view is that they never thought that their foundational research would be used in the way it is today.

What does it mean to say that $P < 0.05$? It does not mean that the probability of your hypothesis being true or false is anything to do with this. In classical statistics the probability of your hypothesis being true is 0 or 1, but which one it is cannot be known. This is because probabilities are only considered as objective facts about the world - so in reality it is 0 or 1 (false or true) and that's the only possibility.

In Bayesian statistics it is like betting - probability is a degree of belief. So you can have a degree of belief of 50:50 that something is true, or 0.7. The idea is that based on data you can update your degree of belief. It is very simple to understand - e.g., before I did the experiment my probability for the hypothesis was 0.1 and now afterwards it is 0.9. That's easier to understand than

The P value in classical statistics is the probability that IF THE NULL HYPOTHESIS WERE TRUE, and you run the experiment an infinite number of times under identical conditions (or it were run in infinite parallel universes under the same condition), that you would reject the null hypothesis.

Huh?

My first degree was in Statistics. I found most of the other students were pulling their hair out trying to understand what on earth that means.

So what happens in practice, especially disciplines like psychology, where the students don't know the maths behind all this (which is only when it makes sense) is that it becomes a rule. $P < 0.05$ is good, and $P > 0.05$ is bad (or a "trend").

An elegant theory becomes a cookbook formula.

Typically if $P > 0.05$ you can't get your paper published.

They say that there is a crisis of replication in psychology. Well, based on statistical theory 5% of papers that rely on this method are going to have the wrong conclusion (i.e., the 'null hypothesis' was wrongly rejected). Another 20% will also be wrongly accepted (this is the notion of 'power'). So already, without anyone doing anything

wrong, 25% of experiments or studies will have the incorrect conclusion. We can never know which 25%, since any replication will be bound to the same types of errors as any other. So the crisis in psychology is really a crisis of misunderstanding statistics.

In the Bayesian approach all you have are probabilities of what you are interested in (your prior probabilities) and how those probabilities change when you have data.

If most of the above is gobbledegook to you, then this is representative of the understanding of statistics.

I am amazed how much funny stuff there is out there on statistics:

<https://www.youtube.com/watch?v=tVx2V75hWRY>

https://www.youtube.com/watch?v=qV6Wc_f1Cgo

<https://www.youtube.com/watch?v=kNz8mfFa7nc>

<https://www.youtube.com/watch?v=fIXvC0SyNsw>

Mel

Attachments area

Preview YouTube video Henrik Widegren ft Johanna Körner Berglund - A Statistically Significant Love Song



Preview YouTube video Good Bayesian



Preview YouTube video All About that Bayes - All about that bass parody



Preview YouTube video Life of a Bayesian



Day 87 - a clean box

Mel Slater <melslater@gmail.com>

Tue, 9
Jun,
12:01

to Event-lab, bcc: Charlie

hi,

[Cleanbox](#) is a technology for cleaning equipment using UV light. I first saw it a couple of years ago at a VR conference exhibition, where they were using it to clean HMDs. So obviously in the current times with covid-19, organisations have looked to cleanbox as a potential solution for cleaning HMDs that are to be shared by many people.

I have just seen some data of a study they did on masks. They claim that masks are harder to clean than HMDs. I don't know if this is true, it seems to me that HMDs have both smooth surfaces like the lenses, as well as the cloth, and areas that are obscured. But I'm not an expert.

I will analyse the data (it isn't much, just 16 rows) soon. On the face of it from a preliminary scan the results look good for cleaning masks.

However, if we think about experiments there are many more factors involved than just the HMD. Of course there are the hand controllers, but I guess what is used to clean the HMD can also be used to clean the controllers. But think of everything involved in an experiment:

(1) Participant comes in. Has to be wearing a mask and at least 2m away from the experimenter also wearing a mask.

(2) Show them into one of our quite unacceptable (from the hygiene point of view) labs in Mundet.

(3) They sit to answer a questionnaire. They sit on what? Has it been cleaned since the last subject? Can they use paper on which to write the answers the questionnaire? - no. Schools have banned the use of paper, everything will have to be with personal tablets of the students. So how do they sign the consent form? Can they use a computer? Probably - provided that the keyboard and screen and desk has been cleaned since the last participant.

(4) Then they enter the VR and do the experiment. If we want physiological measures then all the issues about cleanliness of the equipment is going to equally apply to that. There is going to be a similar situation with earphones and any tracking devices on the body.

(5) Then they come out of the VR and again answer a questionnaire and have an interview and debriefing. Payment will be through a voucher so that's not a problem since it can be done electronically.

So I think it is clear that simply cleaning the HMD is not going to be enough. There is a considerable extra burden.

That's why I think it is so important to try to move in another direction, and see if we can run studies online "in the wild". I am devoting a lot of time to move in that direction.

<https://www.youtube.com/watch?v=KFUe1OWoLj8>

<https://www.youtube.com/watch?v=a5qVuEz3P10>

Mel

Attachments area

Preview YouTube video TRUMP DISINFECTANT REMIX - WTFBRAHH



Preview YouTube video Roddy Ricch - The Box (Clean)



Day 88 - what happens to the socks?

Mel Slater <melslater@gmail.com>

Wed, 10
Jun,
10:51

to Event-lab

Hi,

One of the weirdest things about the lockdown is the loss of socks. We do the laundry frequently and the socks go in as normal, but typically only one of the two socks for each pair comes out again. I'm at a loss to understand what happens to the other one.

Now I'm reduced to only having a vast array of individual socks. So I wear unmatched socks. Luckily since I'm not in the office or a restaurant these days or anywhere where people are going to be looking at my socks it doesn't matter much. But I see a post lockdown crisis looming.

Have others had this experience?

Luckily it is only socks. I haven't yet experienced a case where trousers come out with only one leg, or shirts with only one sleeve. So why socks in particular? I guess it is the only item of clothing that we wear that comes in two parts - except for bikinis. However, I don't normally wear a bikini so that doesn't bother me.

Maybe my odd socks are somehow making their way to the washing machines of other apartments in the building, so that some people are scratching their heads wondering where their extra single socks are coming from. Perhaps there is a general sock exchange across the building and everyone is puzzled.

When the history of the coronavirus 2020-2021 is written, I think that to be fair the sock crisis should be discussed. In particular I suspect that there are criminal gangs who are stealing the socks and making face-masks out of them, and then selling those for high prices. So be careful with your mask. If it smells of feet, report it!

https://www.youtube.com/watch?v=Ky4mDHM3a_o
<https://www.youtube.com/watch?v=NOmQnc2pwT4>

Mel

Attachments area

Preview YouTube video Easy Face Mask from Socks! NO Sew!



Preview YouTube video Louis CK - Oh My God - Putting On My Socks



Day 89 – masks

Mel Slater <melslater@gmail.com>

Thu, 11
Jun,
10:16

to Event-lab

hi,

Now it is compulsory to wear a mask. It is strange.

Imagine 3.5 months ago. You go into a bank wearing a mask... What would likely happen? Now look at this video attached, people have become crazily inventive with their masks.

At the beginning we were told that wearing masks would be useless, even dangerous. Now we are told that they can reduce the chance of a second wave by 80%.

We have to wear a mask, but there is still the need for identification through a mask. See this AI work from Barcelona.

<https://www.hospimedica.com/artificial-intelligence/articles/294781567/new-technology-allows-identification-through-a-mask.html>

A few months ago wearing a burka in public was illegal in some countries. Now it seems that the burka wearers were the clever ones.

In the US wearing or not wearing a mask has become part of the culture war. If you wear a mask you are anti-Trump, and some shops won't even let you in.

<https://www.theatlantic.com/culture/archive/2020/05/face-mask-videos-culture-wars-trump-logic/612139/>

How things change so quickly. What are we not doing now that in a few weeks might be the norm to do in public? I leave it to your imagination.

<https://www.youtube.com/watch?v=eEQomU6iFtw>
<https://www.youtube.com/watch?v=95cTtIOs8yA>

Attachments area

Preview YouTube video Funny Scene in 'The Mask' 1994



Preview YouTube video Bank robber wearing surgical masks has hit at least 6 banks across 3 counties, police say





Day 90 - distance dreaming

Mel Slater <melslater@gmail.com>

Fri, 12
Jun,
11:26

to Event-lab

hi,

As we are getting closer to the 'new normality' (whatever that is) I am dreaming more and more about 'social distancing'. It is now every night. Last night in my dream I was outside talking with someone (a man) and I was continuously assessing whether the distance between us was 2m, maybe 1.5m, or maybe less or more. As I was moving around to try to maintain a 2m he was also moving around, so that it was impossible to know. I was imagining that we should have a 2m stick where we hold each end, so that we are always that distance away. Or another possibility would be that our mobile phones continually calculate this distance and let us know. But this is just a 1-1 problem, suppose you are in a group of n people. It could be quite an interesting algorithmic problem to solve, not unlike collision detection in computer graphics. The geometry of the virtual abstract shapes that would be mapped out by $n > 2$ people continually maintaining a 2m distance while moving around would also be interesting. Actually it is a problem in computational geometry. It turns out that n points can only be equidistant from each other in a space that is at least $n-1$ dimensions.

How did we get from dreams to computational geometry?

Dreams are problem solvers if only we listen to them. As I've said before they are very brilliant if we can interpret them. I don't mean interpret like with 'symbols' that have fixed meanings, but more like the Freudian process of forming associations with elements in the dream, and then you find that they tend to form a pattern converging on a solution to a problem.

The person I was distancing from was, I've realised, a man with whom I've had problems with in the past. As is often the case with dreams, I was actually thinking about him yesterday. I've realised that our connection was one where we were 'equidistancing', circling around each other, never quite getting to the point of the problem, until one day he said something and I exploded, and not long after that after he had another explosion with someone else, the connection was terminated. It should have been terminated much earlier.

The lesson - get to the point! In social distancing don't be polite. If someone comes too close do move away! Don't let them get close out of some kind of politeness or embarrassment.

<https://www.youtube.com/watch?v=luH1vdDPYWA>

<https://www.youtube.com/watch?v=dn7EpvZSsVI>

Mel

Attachments area

Preview YouTube video Distant Dream - The Road To Memories



Preview YouTube video Hitchcock - Spellbound dream sequence



Day 93 - nearing the end

Mel Slater <melslater@gmail.com>

Mon, 15
Jun,
10:02

to Event-lab

hi,

To continue my encounter with VR programming. As I've mentioned I'm using something called A-Frame which allows the construction of VR programs that run in the Oculus browser, and that's combined with three.js which is a Javascript package for doing 3D.

But as I've mentioned it is not like programming. I want to minimise verbal instructions for the experimental participants, so I have included voice and I decided to include some video too in the VR scene. So as part of the instructions when the participant clicks a button the next sequence of verbal instructions is sounded, and with one of them there is video too. Well, that's what I wanted.

The problem is that the video is specified in A-Frame, and it looks something like this:

```
<a-video src = "myvideo.mpg" </video>
```

but to do something with that - like start or stop the video playing or make it visible or invisible, you have to access it in the three.js framework.

However, there is zero documentation about that. So I spent ages on the web trying to find examples, but none were suitable. I just wanted to turn the video on and off, and make it visible or not. But to do that you have to get the three.js pointer to the video as an object.

No idea how to do that.

After a lot of messing about I realised that the video is a child of another object that I had explicitly constructed. Through the debugger I could examine each of the children of that object, to see if it was the video. Finally I found it. Having found it, the amount of programming was approximately 10s, to write the commands in the right places about where to make the video visible, play it, and then turn it off and make it invisible again.

This is what I mean when I say that this type of thing is not programming, it is messing about until you find, often by chance, the way to do what you want.

I don't know how similar that is to programming in Unity. I avoided learning Unity because of the long learning curve, and the multiple versions, and the frequent

changes and updates. I wanted something where I could get results quickly. Well I guess it has been relatively fast given that I'm doing other things as well. But programming should be fun, and exercise my creative side. Instead it only exercises how good I am at searching Google.

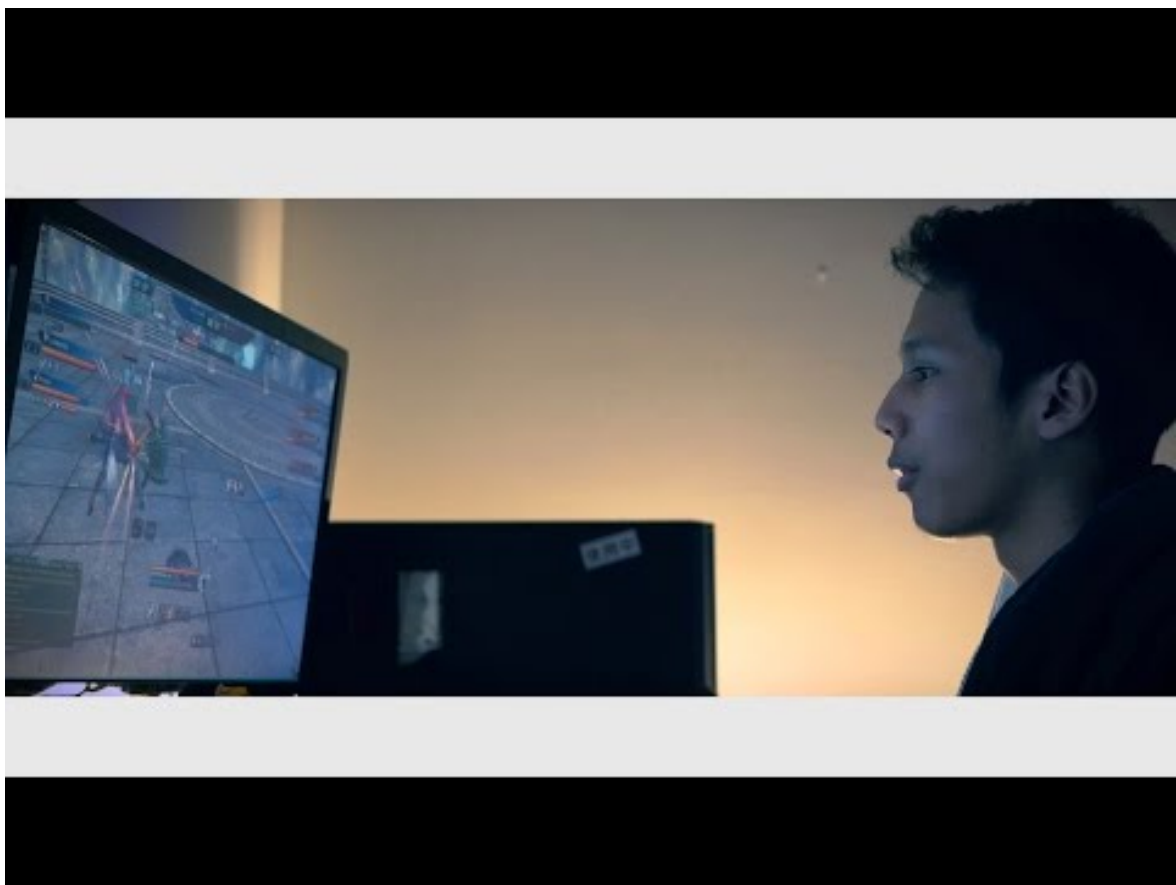
Anyway, now I am nearing the end of the programming.

<https://youtu.be/egQH4vM1q1A>

Mel

Attachments area

Preview YouTube video Hello, World! Award Winning Short Film (Shot on GH4)



Day 94 - towards the end of something

Mel Slater <melslater@gmail.com>

Tue, 16
Jun,
11:24

to Event-lab

Hi,

It seems as if for many practical purposes the confinement is ending. On Sunday I had my first sustained period in the street for 3 months. It seemed to me just like a normal Sunday except that the majority of people in the street were wearing masks.

I thought spending significant time outdoors would be a shock, but actually it wasn't. It was a little bit like taking off the head-mounted display - the real world is brighter and bigger than the virtual world, or indeed the world of our apartment. It wasn't much of a shock, and I think that my many dreams had prepared me for the social distancing: people making strange paths to avoid each other, waiting for people to cross the road so that they could cross while maintaining the 2m distance. I guess it is another function of dreams, to prepare you, to rehearse situations that are likely to happen. Of course, one of the most important applications of virtual reality is the same - to rehearse something safely that would be impossible or too dangerous or costly to rehearse in reality.

People have noticed before the connection between dreaming and virtual reality, [especially lucid dreaming](#) (when you are conscious of dreaming). There is also an [interesting paper](#) that is probably worth discussing.

Normal dreams produce strange confluences of different elements - like you see your uncle but at the same time he is a cat. I've not had a virtual reality experience that does that type of thing. Normally these confluences are meaningful (there is a reason why your uncle appears as a cat, and if you track down that meaning through associations, it can be very revealing).

Normal dreams are hard to remember - as you try to grasp a dream sometimes it just disappears and you're left with just a feeling, or you know "it was about mountains but that's all I can remember". Virtual reality isn't like that - typically you remember the experience as you remember anything else.

Dreams employ space-time distortions - one moment you are walking up the stairs and then it becomes that you're on the beach, but nothing seems remarkable in the change. VR doesn't typically doesn't have such sequences.

Dreams are full of implausible events and situations (you're at a party, which is also a seminar which is simultaneously a wedding). VR fails with implausible events.

So VR experiences are not very much like dreaming. But as has been said (originally by [Randy Pausch](#)) VR doesn't have its own 'grammar' - just like initially movies did not have their own grammar and copied from theatre. Nowadays most VR attempts at storytelling I've seen borrow from cinema. Maybe studying dream sequences could offer VR a new type of paradigm. Here is [something we did](#) from a long time ago that I'd forgotten.

So it is the end of something. Not a return to 'normality' whatever that is, but a qualitative change in what's going on out there. One aspect of the old normality that has returned is that now I hear the constant noise of the lorries, cars and motorbikes below, unfortunately. I'm more aware of it because of the several weeks of absolute quiet.

I've heard a first hand report from Bellvitge hospital that at the most there are 0 or 1 new cases per day, and they are anyway relatively mild. We watched the movie [Contagion](#) last night - it seems we escaped the worst of that, though a lot in the movie was highly accurate. We watched it because the medical advisor to the movie had been on the radio talking about it yesterday morning. [He also had coronavirus](#). Let's hope that as in the movie the vaccine comes quickly, lives are saved, and we can enter a new period of peaceful progress.

https://www.youtube.com/watch?v=YA_sK86sX5I

Mel

Attachments area

Preview YouTube video The end - The Beatles (LYRICS/LETRA) [Original] (+Video)



Day 95 - the end of the beginning

Mel Slater <melslater@gmail.com>

Wed, 17
Jun,
10:48

to Event-lab

"Now this is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning."

Winston Churchill, 10th November, 1942.

It all depends on the so-called Second Wave. The Second Wave is not like what's happening in China with a localised outbreak, but a whole new one over again, necessitating new lockdowns, high numbers of cases, and so on. Some scientists say that this is inevitable, and some say it can be avoided with the right measures now. If it comes it is expected in the autumn.

My view is that the best policy we can adopt is to assume that there will be a second wave, and plan and act accordingly. That certainly means no face-to-face experiments for many months more.

The corticoid drug dexamethasone that they are talking about is not a cure but only useful for people who are really sick - as I've been told it dampens down immune system responses in the most dangerous phase of the illness when the damage is done by the immune system itself. So it is not a general cure.

There is some hope with the Oxford based vaccine - the human trials have gone to third phase and they are already geared up to produce 2 billion doses should the trials prove successful. But even if all goes well, which we can hope for, it will still be several months at best before this will be of any use in ending the current pandemic.

We have to hope that all our VR colleagues over the world are acting safely and cautiously. It only needs one case where someone contracted coronavirus from a HMD and we are done for.

So I'm going ahead to try to move experiments online with my first walking experiment. What I've been working on is minimising the risk of the method producing simulator sickness, which now I think is successful. Then there is still a lot of work to do to prepare the documentation, test it all again etc. Everything takes time.

Another thing we can think about is to move more towards producing experiences rather than only experiments. From an academic point of view we would have to consider how publication would be possible, but this is worth thinking about for sure.

<https://www.youtube.com/watch?v=eyyoaWjVXYM>

Mel

Attachments area

Preview YouTube video Rolling Stones - Time Is on My Side LIVE
Tempe, Arizona '81



Day 96 - the end of short hair

Mel Slater <melslater@gmail.com>

Thu, 18
Jun,
09:39

to Event-lab

hi,

I've not been to have my hair cut since some time in February. It seems to be the worst place to go - since the hairdresser comes very close, breaths all over you, uses equipment on your head - and all this after doing the same to many other people. So, no thanks to that.

Many of the people I see on TV who are doing their shows or interviews from home also have long hair now. Some of them make jokes about it.

So long hair is forcibly back in fashion. I guess the last time it was like this was the 1970s. I wonder if the 1970s way of speaking will also return....

<https://youtu.be/N1ksvl9EsBw>

Mel

Attachments area

Preview YouTube video Police Squad's Frank, Ed and Big Fro Nordberg at '70s Disco Crime Scene



Day 97 - the end of computer games?

Mel Slater <melslater@gmail.com>

Fri, 19
Jun,
08:40

to Event-lab

hi,

It seems that the difference between reality and computer games is vanishing. I went for a walk in the local area, and it was just like being in Superhot, or some other similar game. Here there is a runner without a mask coming from the right, so move to the left fast. No, there is another runner now coming from the left. Stop - duck, dive - but no too late, now there are two runners who have cut off my escape. I lost! Start again. How many lives do we get in this reality-game?

I felt like in one of those movies where the Zombies are coming at you from all directions and there seems to be no escape.

I was amazed that so many people are acting as if nothing ever happened. The bars were packed, no social distancing, tables close together, no masks. Kids playing close together and using all the equipment in the park. I don't think it is supposed to be like that. It may be phase 3, but until there are no more phases it is not safe.

I really hope that people are right - that they can just behave normally again. But this is a pandemic. Even in New Zealand which had totally eradicated the virus has now a bunch of new cases because some officials made a mistake about not isolating travellers from abroad.

Anyway, if you can have so much fun dodging dangers in reality, why bother with computer games? Might as well play the real thing.

<https://www.youtube.com/watch?v=025jjzz5tMk>
<https://www.youtube.com/watch?v=4V90AmXnguw>

Mel

Attachments area

Preview YouTube video Lisa Stansfield - The Real Thing (Official Music Video)



Preview YouTube video Michael Jackson - Thriller (Official Video - Shortened Version)



Day 100 - The End

Mel Slater <melslater@gmail.com>

Mon, 22
Jun,
08:58

to Event-lab

hi,

I started this series of messages wondering about the sense of non-reality that I felt due to the crisis. I pointed out that irreality was different from a loss of Plausibility. In VR the loss of Plausibility means that some expectation is broken, or for whatever reasons the participant doesn't have the illusion that the events taking place are really happening, even though they may still have the strong illusion of being in the virtual environment (high Place Illusion). However, the irreality at the start of the crisis and the lockdown, wasn't like this. It was more of the thought "this is no dream, this is really happening" (but it can't be!).

https://www.youtube.com/watch?v=fb_IYsaXwXg

This feeling persisted for some time, like we were acting out a role in some play or movie that wasn't real, and there was some other reality that we had put aside for a while.

Now it seems that "a while" has come to pass. How was the transition from loss of reality to "this is the new reality" the so-called "new normal". What changes occur in the brain? How can we model "this is no dream, this is really happening" in virtual or augmented reality? (It doesn't have to be a negative situation). This would be some accomplishment - that in virtual reality we could induce a (positive) feeling of "this can't be happening".

Maybe we have already done this at a simple level. We found that when we embodied "White" people as "White" in a negative situation their body ownership decreased. Body disownership is a sign of derealisation: this can't be happening to me, so it can't be me.

In our project on rock concerts, I want people to enter in VR, and think - "Wow, this is amazing, I'm back in 1983, this can't be happening!"

<https://www.youtube.com/watch?v=yQ768l2gfoQ>

What happens next? I've given various talks over the past 3 months just looking at my own screen, hearing nothing, and minimal feedback. Questions come through by text, usually read out by a disembodied someone. It is a strange experience, you have the feeling that people are out there but you're unaware of them. I've had many meetings where the people are just little video rectangles. Is this going to be the new normality? I prefer to be amongst real people.

Also when these events are happening I find myself thinking that people are actually together somewhere, and then I remember that no one is together, each one is in their own home. It is still a strange realisation. How do we know the difference between this dream world and the real world? Maybe the world of video conferences reflects a truer version of reality than we think.

<https://www.youtube.com/watch?v=NpyaKWY9HOc>

On the other hand, for example, there have been EU project reviews that were supposed to be over several days requiring a large number of people travelling to Brussels but finally taking place in just 3 hours on video conferencing. Think of everything saved by that - no travel, no disruption, no expenses - 3 hours at home compared to flights and several days in a hotel. Maybe the Commission will realise that this is a better model and use this permanently.

This is also a time for shared VR and AR to really shine. What you lose in a video conference is everything that is based on spatial layout, and the consequences of being in the same space with others. VR and AR can compensate for that - not completely, but it is on the way. Because of this crisis everything will be accelerated - trends that were slow will speed up, things that were slowly disappearing will disappear faster, and changes that were on the horizon will rapidly become more present. Maybe our earlier work on Beaming will become more important:

<https://www.youtube.com/watch?v=TwkkB2aDQM4>

<https://www.youtube.com/watch?v=oh1B6C3JggQ>

A strange mix of topics has been discussed here - everything from the computational geometry of social distancing, from games like Superhot to boxing, from the Beatles to Michael Jackson, all the way from Zombies to derealisation, from dreams to parallel universes. Leaving these daily messages behind is like saying goodbye to them.

https://www.youtube.com/watch?v=t_IP2Eh5kRI&feature=youtu.be

So it is like a long goodbye

<https://www.youtube.com/watch?v=dSRZmLb3xNc&t=211s>

But I'll be back

<https://www.youtube.com/watch?v=l-9dthiJw-Q>

Finally maybe what has happened will make us realise something new about the situation of the world and our lives.

<https://www.youtube.com/watch?v=XvuM3DjvYf0>

Entonces en la próxima lockdown escribiré todo en Castellano.

<https://www.youtube.com/watch?v=2R5jOVZJCK4>

https://www.youtube.com/watch?v=AYZz_qYw_j4

Mel

Attachments area

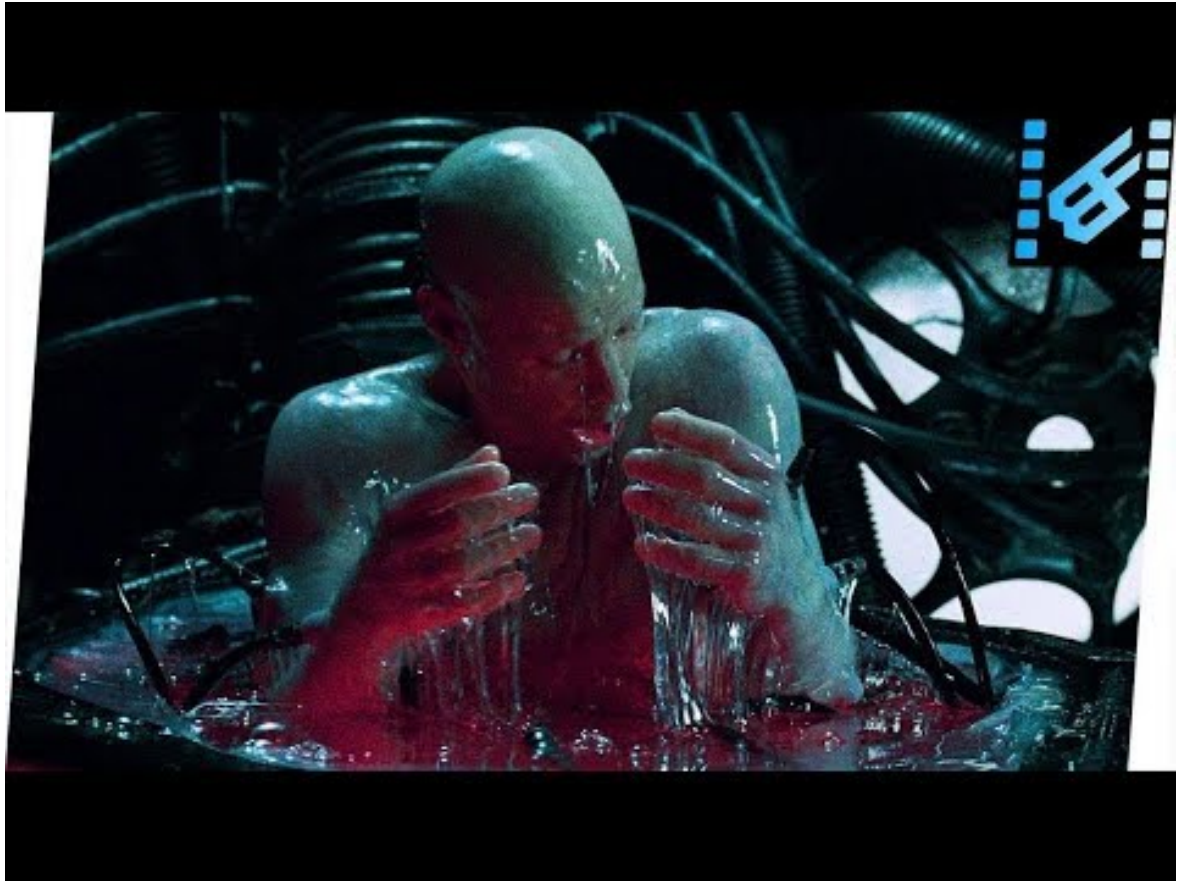
Preview YouTube video No Dream RB



Preview YouTube video Top Songs of 1983



Preview YouTube video Neo Wakes Up in the Real World | The Matrix (1999) HD Clip



Preview YouTube video Surrogates Trailer [HD]



Preview YouTube video Multi-Destination Beamng



Preview YouTube video Annie Hall (Escena final con subtítulos)



Preview YouTube video Curb Your Enthusiasm: The Double Goodbye



Preview YouTube video Terminator - I'll be back.avi



Preview YouTube video PLANET OF THE APES (1968) - Lady Liberty Destroyed



Preview YouTube video The end of every ZOOM meeting

The end of every zoom meeting



Preview YouTube video That's All Folks - Bugs Bunny



Re: Day 100 - The End



Mavi Sánchez <sanchez.vives@gmail.com>

Mon, 22
Jun,
09:40

to me, Event-lab

Hi Mel and Event-lab,

Thanks for the 100 thoughts, that made us all think as well. I did not know that when I thought you were working, you were watching movies in youtube ;-)

For the Event-lab, sorry that I did not join your meetings, because I had many others on my side. But I follow what is going on and also we have a parallel VR-life in IDIBAPS.

I wish you a good (working) summer and watch out: there are viruses out there, sometimes on pretty faces.

Best,
Mavi