Synthetic Synesthesia (working title, by Mette B.)

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Synthetic Synesthesia uses technologies, substances, rituals or other vehicles of intervention to create experiences that give a person the temporary impression of having advanced perceptional abilities, higher sensitivity, higher 'processing-power' or immediate influences on things that would require vastly more labour normally.
The approach combines a few strings across domains and strengthen the articulation of this as a meme. The domains it may draw from are medicine, art, technology, cognitive science, transhumanism, artificial intelligence, cyborg anthropology, augmented reality and probably more.

The purpose is to unlock learning curves in body-mind systems that may have been hidden, suppressed or dismissed. An experience where through augmentation (technological extension of senses) things have been felt as if they were real and caused/felt/change by means of one's own body, even though the energy for the labour or extended perception came from outside this body. Such experiences are meant to install a longing/wish to naturally build these capacities. Instead of binding the user for an indefinite future to the medium that allowed that miraculous experience (which is the purpose of entertainment technology) the focus is on the 'organic' learning-curve/curiosity/exploration that get's triggered through the one/few-time experience. The equipment is temporary and shall be removed as soon as possible so that the developmental thriving of the individual can seek to explore ways to fill that space that has been opened once - almost like in a dream or a prophecy.

The phenomena of synesthesia ("a neurologically based condition in which stimulation of one sensory or cognitive pathway leads to automatic, involuntary experiences in a second sensory or cognitive pathway" - Wikipedia) and especially the creative advantage that some learned to harness from it (when the loop is complete of translating something into another level, a new synergy happens there and it can meaningfully be interpreted back into the level that it came from) is a great source of inspiration to construct such experiences. Synesthetes themselves seem ideal for that creation-process as lots can be derived from investigating the difference of their perception in relation to people with 'standard sensory neuro-signal-processing'. The very motivation of Synesthetes to show others how they see the world is the best drive for this and should be encouraged and supported.

Eventually the Synthetic Synesthesia project is an exploration about how humans learn, how internalization affects our responds and what we are able to pull into the processing-capacity of on biological entity.
If climate change could be felt painfully immediately in the moment you exhaust over-proportionally much CO_2, it would be in the very self-interest to keep it low - to give a drastic example of the gigantic gaps between cause and effect that span over large times and large distances. Immediate affection for such dimensions doesn't come naturally for us, probably for good healthy reasons. But could it be stimulated? Experienced in an analog-level?

How come we feel disgusted if someone doesn't clean their hands after using the toilet, even so we can't see the bacteria on the skin? How come those of us who were raised with that imperative feel an immediate urge to leave the bathtub when they hear a thunderstorm coming? There is obviously a hardwired connection made from something that existed in the beginning only as intellectual knowledge - which is the very nature of learning. But could these 'installations of attractors' be made more strategically? I guess this has been explored aggressively by marketing psychology - for less honorable purposes i would dare to judge.

The Synthetic Synesthesia project acts as a practical research laboratory into this meme. It nurtures the exchange around the subject and will thrive for an overview about artists, programmers or any geeks who are relevant in this.

Temporarily augmenting special skills that dislocate perception 'impressive' enough to trigger learning curves into untapped potential or wire remote areas closer together into 'actionable' links (like feeling an immediate response to intellectual knowledge in relation to a huge time-span). Bringing the abilities of our biological system into immediate actionable linkage with larger external complexities to process those with the sense-making complexity-handling we are equipped with and can expand into.
Traditionally/archetypically this has been the role of the elders... the youngsters are impressed by the wisdom and skills of their elders and want to grow into these abilities themselves. Nowadays the role of the elder is drifting more and more to the edge of our society and at the same time the skills people possess seems growing, <because> technology is augmenting them - the bare 'bodily' skills are not increasing at all. So maybe, like a trojan horse, technology could also be used to plant these longings/ambitions for possessing skills and abilities by yourself that traditionally the elders did? Using the fascination of technological 'leading edges' to make people more independent from technology in the long run.

A crucial parameter to be aware of in such experiences is to which degree it IS possible to explore the 'new horizon' by bare biological means. A baby that learns to move around things on the iPad might be fun to watch and builds skills to use the iPad more 'natively' later (from which unforeseen synergies might very well come), however, that exploration is entirely bound to a touchscreen-environment (and thereby dependent on a highly costly infrastructure and thereby currently entirely dependent on the availability of cheap fossil energy, a very finite resource) and will hardly find any non-technological use. Rather the opposite might be the case in that example; a disappointment (or even trauma) of the non-interactive nature of all other surfaces than iPad's...

Two learning-archetypes i thought about so far - both around filling a space:
1) one that has shown it's reality, form and pattern fairly clearly - either in someone else or in glimpses in yourself
2) one that you can not scope in reach or form but that you're drawn towards by a force

Possible side-effects

Reduce the tight bond that people see between technology and the future by showing ways for 'high-tech' skills in people without technology involved permanently but by utilizing more of the "bare" biology we're equipped with.
Create vast new areas for creativity in "neuronal gap-filling" and "superpower-triggers". Inspire the notion of thinking everything through/forward as to how it re-connects with our bodily and social abilities ('un-augmented' potential).
Raise societal acceptance of 'special abilities' into admiration and seeking to harness the gifts that come with it.

Space of possibilities

To look at what's going on inside a living human body you can use instruments to measure all kinds of variables; blood pressure, heartbeat, breathing rhythm, brain-waves, adrenalin-concentration... tons of physiological parameters. Some of them the person who is conscious within this human body can access easily or change by will. Other's show the effect of their change later. There are five channels through which the outer world get's perceived; these data-streams have the highest bandwidth and most immediate throughput into consciousness. Good to keep in mind though that this process entirely depends on all the other "un/half-conscious" variables in the body to be kept in minimum fluctuation around a healthy configuration.
Let's say we could use technology to create artificial causal 'wirings' (for instance mapping/enforcing the cause/source-level of heartbeat to the effect/target-level of breathing rhythm) within all available variables. The very most of all this possible connections would be useless or even threaten the survival of that person. Narrowing the target-level to the five senses eliminates all immediate life-threatening connections. One branch in this space (source: all physiological variables / target: 5 senses) of possibilities that's actually in use is to display migraine-patients the diameter of the blood-vessels in their brain in real-time ('Biofeedback' in medicine) so that they can learn how they can create emotional and mental conditions by will that will make it likely for the blood-vessels to increase in diameter (reduced blood pressure in the brain releases headache). Many more branches might be very interesting...
What would you learn to paint if the color of your brush is directly mapped to your heartbeat and the size of your brush directly mapped to your heartbeat?
How would it feel like if you would feel the demographic data of the last century from your country - would it be painful to loose the diversity on the edges because more and more people move to the city? Immersive/Felt Data...
We could narrow the source-level to the 5 senses as well as the target-level. That gives us 5x5=25 possible direct connections, of which 5 are obviously already in use (eyes see, ears hear, tongue tastes, nose smells, skin feels). Looking at all possible connections between combinations of senses (e.g. mapping what you feel and hear onto what you see and taste) gives you $2^5 x 2^5 = 1024$ possible wirings. But let's include <mind> into both the source-level, it's a very rich source of variables of course, data can come from memory, associations, symbols, dreams, desires... everything :) Still, if we treat it as one element in the source-level that makes a total of 2048 possible artificial wirings. This space is what i call "Synthetic Synesthesia". Synesthetes are actually hardwired with one or more of this possible connections - they associate color or even personality with numbers/words/letters/weekdays, they can hear visual input and many more variations.

Resources and connections

- [Sonified](#) iPhone-app (via [Thomas Arthur](#)) and [interview](#) with [Perry Hall](#), it's creator
- Synaesthesia Research Team from the University of East London
- St. Louis Synesthesia Research Team, Professor Berit Brogaard
- [Mette Böll](#), working on PhD in 'Biology of Leadership', Copenhagen
- [Professor Frederik Stjernfelt](#), Center for Semiotics, University of Aarhus
- Centre For Subjectivity Research Copenhagen: cfs.ku.dk
- Center of Functionally Integrative Neuroscience (CFIN) Aarhus: cfin.au.dk
- [Gabriel Shalom](#), Videomusician, [KS12](#), Berlin
- [EMO-Synth](#), emotion driven music generator by Valery Vermeulen, OfficeTamuraj, Belgium
- [Cyborg Anthropology](#), Amber Case, US
- Biofeedback article, Synesthesia article & List of superhuman features and abilities in fiction :)
- entanglement (p/m), fluid framework defining constraints of unintentionality, @gavinkeech
- [McGurk Effect](#)
- [YEARS](#); record player that plays slices of wood
- [Blending and Conceptual Integration](#)
- [Extroverting Interface - Laser Aura](#)
- [Visualization](#) of demographic data (moving) within Norway
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Ideas for experiences

Emotional Aura
Changing Olafur Eliasson's installation "[Your atmospheric colour atlas](#) (2009)"(room filled with dense fog, static differently colored lights in the ceiling that bath the visitor in intense colors while walking through the color-spectrum) by giving arm-rings to visitors that measure *heartbeat*, *skin temperature* (together indicator for emotional stress-level) and *position* in the room. With that information and lights in the ceiling that can change their color, every visitor could be bathed at all times in the room in the color that represents their emotional state (red for stressed, light blue for calm...). They would be stressed for instance and then breathe deep - in real-time they would notice the color around them changing. And furthermore they would see other people surrounded by their emotional aura and how their interaction with them might change emotions of both parties! This simple notion of seeing someones emotion so obviously will be an experience that will make more sensitive to emotions of fellow human beings. The memory of this experience will ideally cause a sustainable increase in awareness and sensitivity for 'seeing' (sensing) other peoples emotion.

Open Source App Store for Synthetic Synesthesia wirings (from conversation with Rose)
A studio/lab that is equipped with a huge variety of sensors to read your physiological and sensory data and wire it to output devices. A space where you can be the artist, working with the data your body produces, wired through your body and back into your body again. A wild dance of being the material, the shaper and the observer all together. A lab to find meaningful connections. Both the patterns as well as the parameters can be shared like in an app store.

EMO-Synth
Valery Vermeulen in Belgium has developed an emotion driven music generator. The algorithm can create music that changes the emotional state of the person who is connected to the computer through biosensors (more info on his site). This experience might be frightening and/or fascinating for people and can show the manipulative/fluctuating nature of emotions which might result in a more humble and detached way of handling one's emotion.
It might be interesting to explore how a well experienced DJ could work with this if his emotional resonance with the dancing crowd is wired to his musical mix - he can consciously influence the music but also his emotions will be parameters in a mapping-algorithm that manipulates pace, rhythm and arcs of his conscious choices.

Subgroup meaning mapping
In a group with size n the number of possible different subgroup is n^2. So with 6 people you can form 64 different subgroups (and with 20 people over 1million subgroups). Every one of these subgroups get's now charged with specific information (like a letter in the alphabet or a tone = an audio frequency on the harmonic scale). *Step 1* is to train the group to form words or melodies by forming the appropriate subgroup-sequences. After this 'training' *step 2* is to let them intuitively walk around the room and see if the constellations they form will form any interesting melodic/linguistic patterns... and can they learn to improve?

Distance between people
A computer knows the position of people in a room at all times. In a game where they walk around each other the computer changes light+sound in the room every time the average-distance between people in the room under-runs a certain value. This experience will be so impact-full that the group will remember that immediate feedback even so the computer get's taken away... the 'echo' will remain, they will be much more aware of their density in the room. That i would call 'social feedback'.

Complexifying nonverbal language [...] (see here)

Posture morph exercise
People are standing randomly spread in the room. Everyone is following this instructions: Look secretly for one candidate in the room. Find a posture that express your current emotional sate and freeze. If i say "go" you adapt your own posture in slow motion to the posture of the person you picked as a candidate. And you continue to adapt to the posture that this person has right now and right now... not her/his starting position.

What will happen after 'go' is that the group will most likely slowly converge into one common posture! An impressive effect to witness. Other variations of the result is that two people or subgroups chose candidates within themselves and separate islands of converge occur.

A following collective reflection upon the influencing factors will yield thoughts about people who are adapting slow as having more power over the final constellation. Or for instance two people choosing themselves could have total dominance over the final shape if the rest of the group is linked to them - all other 'postural' information than from those two would be lost.

Having experienced that once will install an attractor in the mind of the participants that will assume some sort of convergent dynamic in a similar setting on other levels - something that might not have been intuitively clear at all before (usually for dancers or mathematicians it was clear though, it's around 50% who can successfully simulate this before execution).

Illustration of a re-wiring scheme