NYUx - Theories of Media and Technology
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Curation 3 - Cyborgasms / post-human possibility mappings

I remember once reading a philosophy paper (Clark 1998) which argued that the boundary of the mind need not be delibmited by the skull: that a notebook, for example, could be understood as an extension of the mind. At the time I though it was probably a young academic's attempt to take a mildly contrarian position in order to develop a career: it has some note about the authors' being listed in order of belief in the thesis, and I assumed that seniority was counterbalanced by belief in an effort to gain advancement in the world of ideas.

I initially took a similarly sceptical line on the notion of the cyborg, thinking of it as a slightly geeky or technocratic fantasy along the lines of Ropocop, Terminator, the Matrix, or any other bad idea of merging one's consciousness with that of a computer, which seems to me to be something of an antithesis of progress (I mean, by all means outsource boring things to machines, such that our lives our easier: hence the ox, the tractor, the Oyster card....; but be careful when you transfer some fundamental part of yourself - or lose some of your freedom - to a machine. A standard trope of this these days might be sat nav, contrasted with the growth of taxi drivers' brain regions for finding directions: if we outsource our capacities, or our instincts, do we risk losing part of ourselves that is worth wanting? (Or do we just transfer it to a higher level? Perhaps this depends on our understanding, or our priorities). In short, I think bungee jumping has much to recommend it as an anti-anaesthetic for the sensory self.

As I've worked through the material on Cyborgs in unit 9 of the Theories of Media and Technology course, I've found that N. Katherine Hayles' book "How we became posthuman" has provoked some interesting thoughts, and I hope to finish the book in the coming week. Some quotes I found interesting:

> *The posthuman subject is an amalgam, a collection of heterogeneous components, a material-information-al entity whose boundaries undergo continuous construction and reconstruction.*
>
> *If "human essence is freedom from the wills of others," the posthuman is "post" not because it is necessarily unfree but because there is no apriori way to identify a self-will that can be clearly distingished from an other-will*

These ask questions of subjectivity and boundary in a somewhat similar way to both the Extended Mind paper, and also actor-network theory, which I looked at in my previous project. As yet I have not had time to digest the ideas, so I won't attempt to develop them at this point.

Rather I note that a common notion in the discussion of cyborgs is the idea of enhancing human capacities: the spear makes us able to hunt, armour makes us better protected in combat (Batman? Robocop? Mediaeval knights? The Roman legionary?), the car (batmobile, space shuttle) makes us better able to locomote, etc. So I reasonable means of focussing the topic of cyborgs might be to choose a human capacity to augment.

I sometimes think that one of the defining capacities of life - and particularly humans - is that we can make decisions, or choose between possible courses of action. In this we contrast with say water or rocks, which are slaves to gravity and other natural forces. A tree can decide to grow or not to grow, a seed to germinate, and so on. Once muscles are invented, the question of where it's best to be becomes very real: a nicer box for my pet cat, or different drive through restaurant for those cybors already augmented with cars.

Such decions must be informed by some kind of information from the environent, and such information means perception. One of the great blessings of being a human is our imagination. I have come to understand imagition as a sensory process by which we internally stimulate our sensory neural circuitry, preforming a virtual simulation of an imagined reality in our brains, without the need for presence of corresponding external stimulous. This is perhaps Shakespeare's mind's eye. The imagination is therefore a process by which we perceive alternative possibilities (and then, possibly, choose between them).

With this framing in mind, I have chosen a number of artifacts and texts which I think have something useful to say about this process, whereby the extend mind - or our post-human cyborg selves - perceive multiple possibilities in the world, and then (potentially) choose between them (choice being understood as taking some action instead of another one: in some sense an embodied, or physically realised, thing - although it is of course possible for cycles of imagination to recurse within the confines of the mind, extended of not - hence Beethoven's being able to compose in his head despite growing deafness).

The hope here is that these will inform an interesting project which somehow creates an artefact which increases the human capacity to perceive alternative possibilities (in some domain). (If this seems abstract, it is intentionally so!).

REFERENCES

Clark, A., & Chalmers, D. (1998). The Extended Mind. Analysis, 58(1), 7-19. Retrieved December 27, 2020, from http://www.jstor.org/stable/3328150

Hayles, N. Katherine (1999) How we became post-human: Virtual bodies in cybernetics, literature and informatics. Available online at https://monoskop.org/images/5/50/Hayles_N_Katherine_How_We_Became_Posthuman_Virtual_Bodies_in_Cybernetics_Literature_and_Informatics.pdf

Artefect 1: Mal tries to remember how to use a tree trunk to cross a river in William Golding's "The Inheritors", chapter 1

"Why did you leave me? You have more pictures in your head than Lok." Ha pointed to the water.

"I came quickly to see the log."

"But the log has gone away."

The three of them stood and looked at each other. Then, as so often happened with the people, there were feelings between them. Fa and Nil shared a picture of Ha thinking. He had thought that he must make sure the log was still in position because if the water had taken the log or if the log had crawled off on business of its own then the people would have to trek a day's journey round the swamp and that meant danger or even more discomfort than usual.

[...]

At last Mai finished his cough. He began to straighten himself by bearing down on the thorn bush and by making his hands walk over each other up the stick. He looked at the water then at each of the people in turn, and they waited.

"I have a picture."

He freed a hand and put it flat on his head as if con- fining the images that flickered there.

"Mai is not old but clinging to his mother's back. There is more water not only here but along the trail where we came. A man is wise. He makes men take a tree that has fallen and..." His eyes deep in their hollows turned to the people imploring them to share a picture with him. He coughed again, softly. The old woman carefully lifted her burden. At last Ha spoke.

"I do not see this picture."

The old man sighed and took his hand away from his head.

"Find a tree that has fallen."

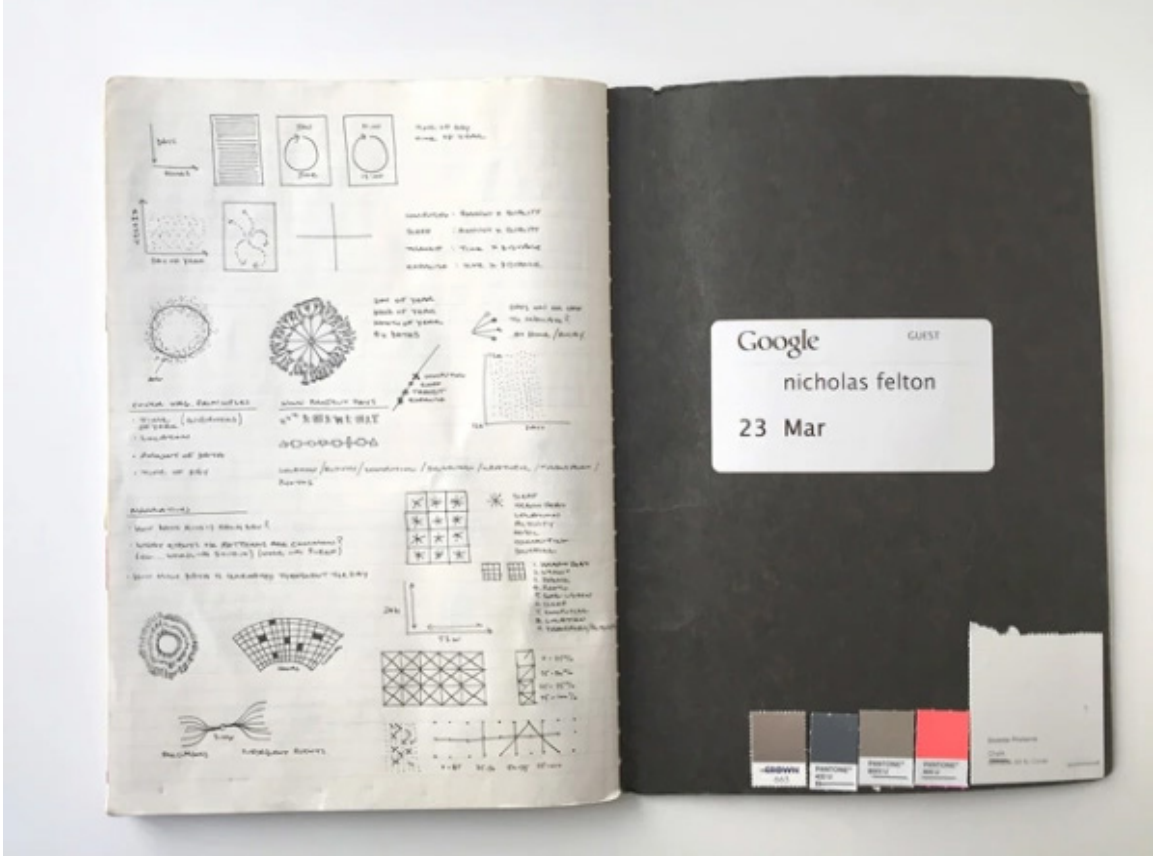
Golding's brilliant 1964 novel "The Inheritors" imagines the world from the mind-point of Neanderthal man. In the passage above, the novel's small group of Neanderthals have come to a river where a log used to provide a crossing point, and have found that the log, and so the crossing, has gone. The group has to imagine (find a picture) for how to solve the problem, by using another dead tree. Golding's language brilliantly portrays the beginnings of imagination as a potentially shared visual process ("I have a picture" and "I do not see this picture"; also "you have more pictures in your head than Lok").

Here the process is perhaps not augmented by artificial means, but is a purely internal mental process, or perhaps a social process. But here too we see the "extended mind" in the hands walking over each other up the stick, perhaps a symbolic representation of legs walking along a log to cross a river.

This example provides a primitive example of the consideration of unrealised possilibities, and their transferrenace into action, or reality (the group do find a log, as he says). There's also an idea of intuitive, perhaps telepathic communication, contrasted with verbal instruction ("find a tree that has fallen") .

Golding, William (1964) The Inheritors. Available online at https://onlinereadfreenovel.com/william-golding/33278-the_inheritors.html

Artefect 2: the sketch book



I was tempted here to cite paper and pen as the key artefact, but the design sketchbook is perhaps more instructive, since it is common used to develop ideas (that do not yet exist in the real world). Thus, it can be understood as an cybrogian extension of human capacity.

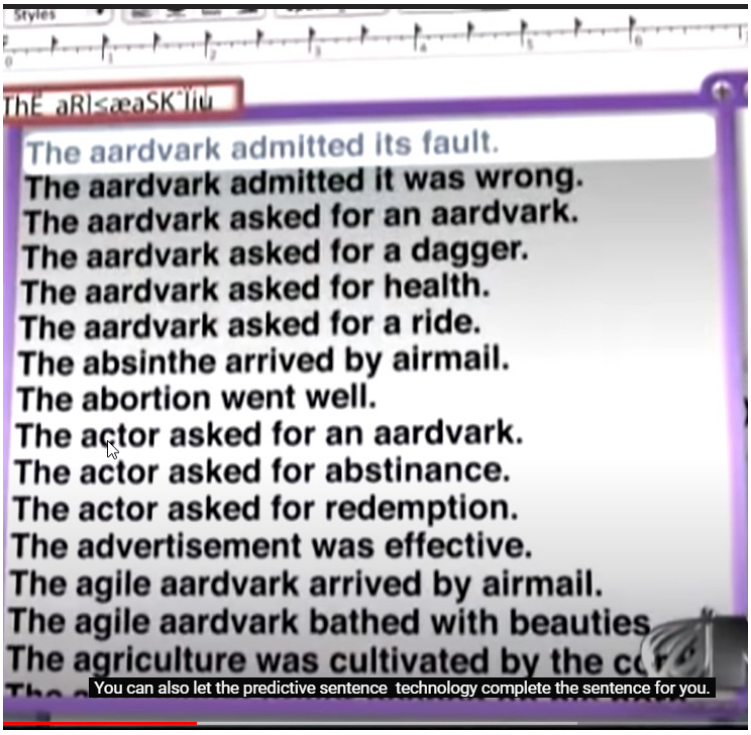
This can be illustrated in a question I've heard asked by teachers in design schools: "what is the sketch telling you?". This suggests an interactive process between the brain which guides the pen holding hand, and the visual system which then reads the corresponsing marks on the paper, which then restimulate the brain, which then makes the hand make more marks on the paper, and so the cycle repeats. The strength of the sketcking process is that it is quicker to rearrange sketches on paper than it is to rearrange objects in reality - and it's frequently quicker and more intuitive than working on a computer screen too, hence the enduring popularity of the notebook.

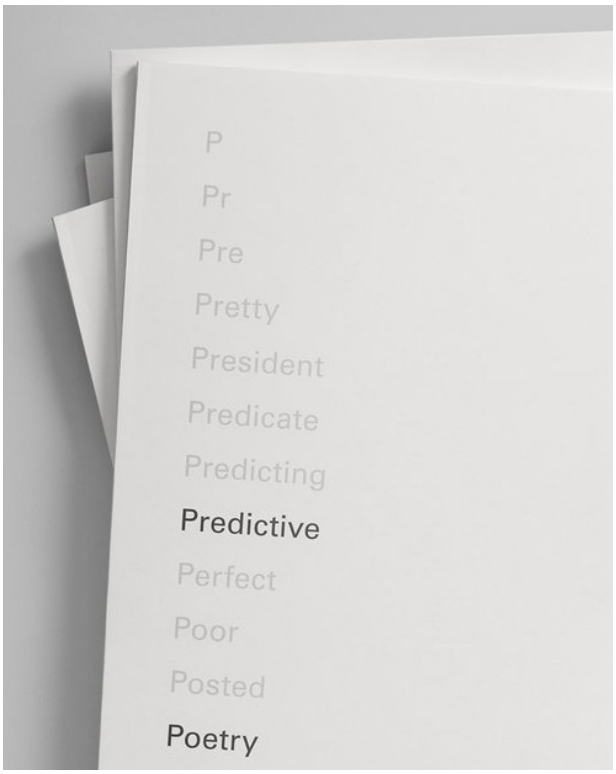
(I've recently acquired Boox Note 2 ereader, which as an electronic notebook function which I really enjoy using in a similar capacity, with similar intuitive drawing function via a stylus, but I think the paper notebook is still the archtype of this kind of extended imagination.... it might be interesting though to consider the electronic notebook as a means of augmenting the question "what is the sketch telling you?")

(Another point of reference here might be the Judgement of Thamus: a mythical story where Thamus questions the value of writing as a technology, when it is offered devinely: does it increase our powers, or replace our capacity to remember? This seems to me to be an important question in relation to post-human conceptions of agency).

See examples of sketch books at https://www.fastcompany.com/3056991/16-famous-designers-show-us-their-favorite-notebooks
For Boox Note 2, see https://www.boox.com/note2/
For the Judgement of Thamus, see https://www.memoriapress.com/articles/the-judgment-of-thamus-education-technology-and-the-outsourcing-of-knowledge/#:~:text=In%20Plato's%20dialogue%2C%20

Artefect 3: predictive sentence technology / Predictive poetry





The Onion's 2009 spoof of Apple's laptops introduced the idea of the Macbook wheel: a laptop with no keyboard. If the notion of "predictive sentence technology" then seemed like a joke, as illustrated in the image above, some ten years later predicate sentence technology is now part of gmail, where common sentence completions are sometimes available in a light colour, allowing for automatic completion by pressing tab. Similarly, when composing text messages, we are frequently offered alternatives between three most likely words, saving us the bother of typing. This choice between possible future words is used as a creative process in the poetic poetry of Craig Ward, illustrated above, which plays with the idea of repeatedly choosing (by some strategy) between the three alternatives presented by the messaging application.

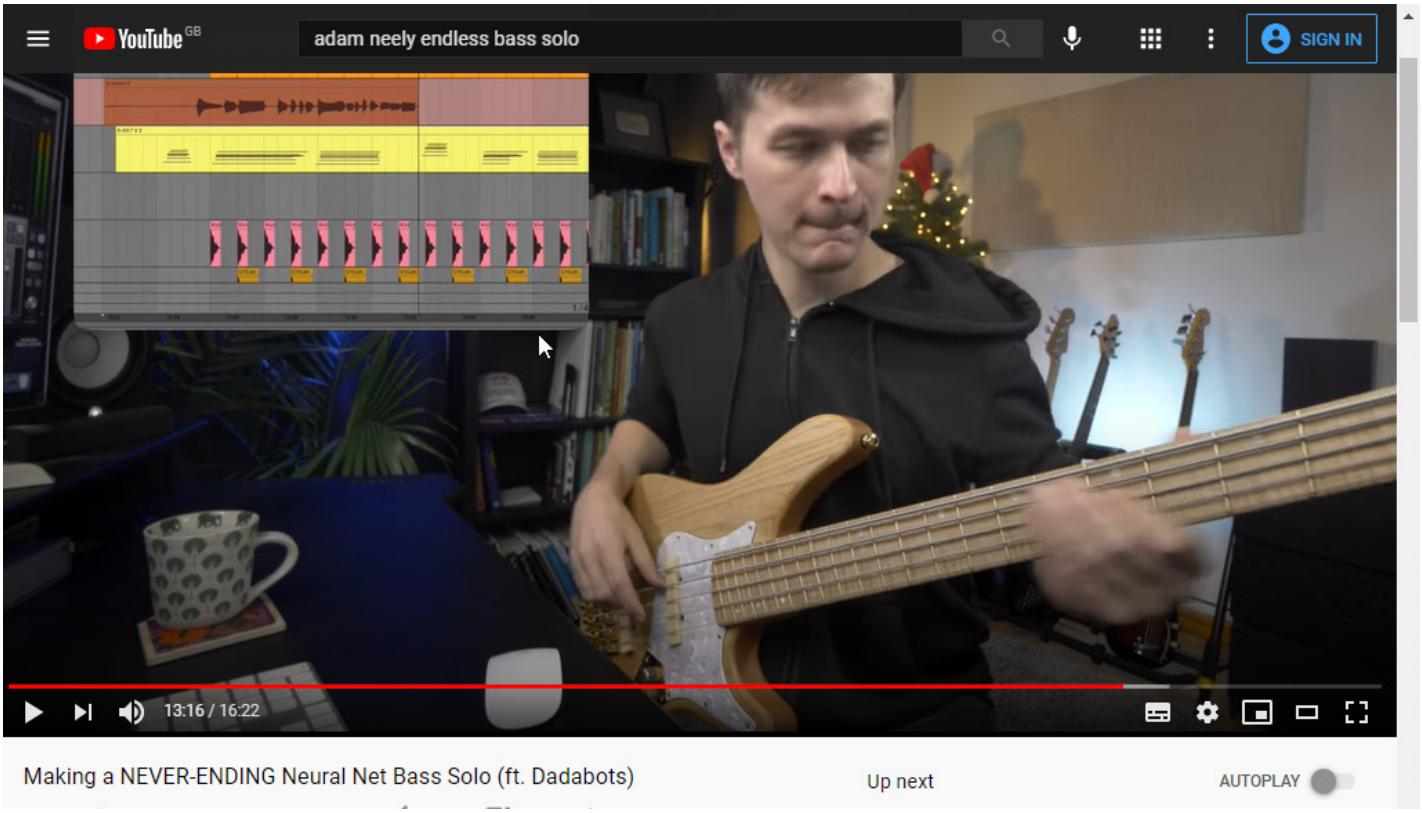
This idea of a computer - or external artifical construct - presenting alternatives which we can choose to accept or reject - is interesting, because the very act of choosing between alternatives can change our output. Do we increase our word-power if Grammarly suggests a better word? Or do we regress to some mean of banal and common expression ("I think it would be nice to go for coffee maybe someday...."). It's also intersting to note that the possible alternatives offered can be influenced by our previous choices, or the person we're writing too (for example, when I write predictive messages to male friends, they are more likely to suggest beer than coffee; vice versa for female friends).

Predictive text generally uses artificial intelligence algorithms, whose output is generally a probability distribution of possible next words (or choices). This abstract idea could be expanded: the cyborg / post-human can make its decisions from a menu, Is the menu a restriction (cue typical capitalist patriachy narrative??), or a freedom - just a like a good friend / parent / lover, who points out possibilities you haven't considered?

So, one quetsion might be: can artificial intelligence be used to increase our imaginative or poetic powers?

The Onion (2009)- Apple Introduces revolutionary new laptop with no keyboard. Available at https://www.youtube.com/watch?v=9BnLbv6QYcA&ab_channel=TheOnion
WArd, Craig (2017) Predictive Poetry. Available at http://wordsarepictures.co.uk/predictive-poetry

Artefect 4: relentless dopplerganger and the endless bass solo: cyborg music?



Adam Neely's vlog on "making a never-ending neural net bass solo" relates his experiences in co-operating with "Databots" to produce generative bass solos using recursive neural networks, whose inputs is a digital audio recording of Adam playing bass. The vlog relates his experimentation with this method, and lets us hear the output.

Several points are notable from this: the parameters of the neural networks are tunable, giving a spectrum between the production of output which is the same as the input, and the output of white noise (which has lost all structure). Between the two is a happy medium of variation and degreneracy. The output of this network is then used for the creation of new music by Adam, the musician, producing a music that has in some sense come from him, but is also not what he would have chosen himself (and therefore we can say that it is an example of cyborg-produced music? Musical choices being made that would not otherwise be made?)

A comparison here could be made to other techniques that have been used to arrive at new musical patterns : perhaps serialism (the idea that the 12 notes of the musical scale should be played in a randomly determined sequence). Serialism doesn't seem to be a technoligical enhancement of the human being, so much as a methodological one.....

Another key idea is that using digital audio as opposed to MIDI (so music digitised at the level of sound waves rather than notes) is key to the success of this method, and allows timbre to be expressed. In other words, the form of digital encoding chosen can be important to the success of a cyborg-medium.

For relentless dopplerganger, see https://www.youtube.com/watch?v=MwtVkPKx3RA&ab_channel=DADABOTS
For the endless bass solo, see https://www.youtube.com/watch?v=2xMhRwxXJTc&ab_channel=AdamNeely

Artefect 5 - Minority report (2002 film)

Minority Report explores a world where crime is prevented before it occurs by precognition: essentially, prediction of the future by a (super-human? cyborg?) super intelligence. It explores the possible dystopian injustices which might stem from the application of such ideas: the minority reports refers to the pattern of one of the three "precogs" giving a different report (of forthcoming events) to another two.

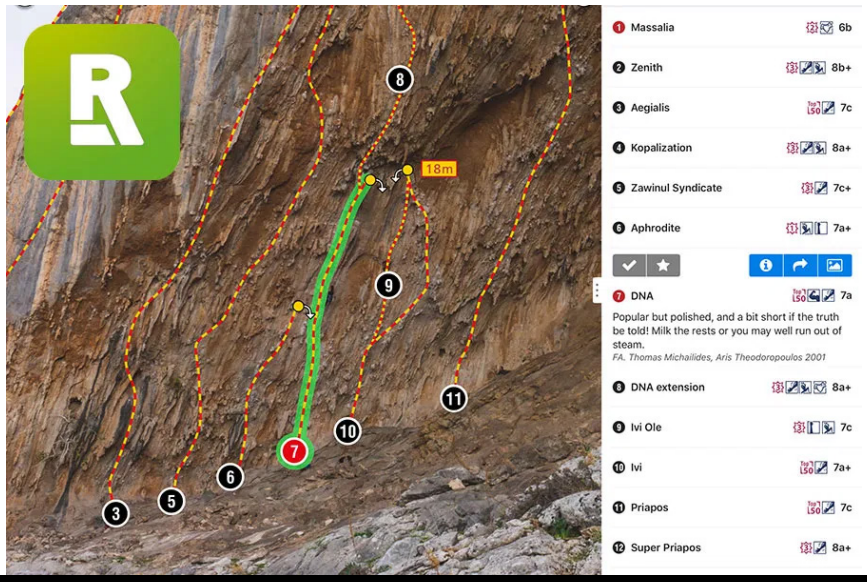
This is an idea of bifurcating futures not dissimilar to the predictive text example above, and it offers similar dialemmas in a different domain: is it possible to define possible futures? To ennumerate them, and to make them discrete?

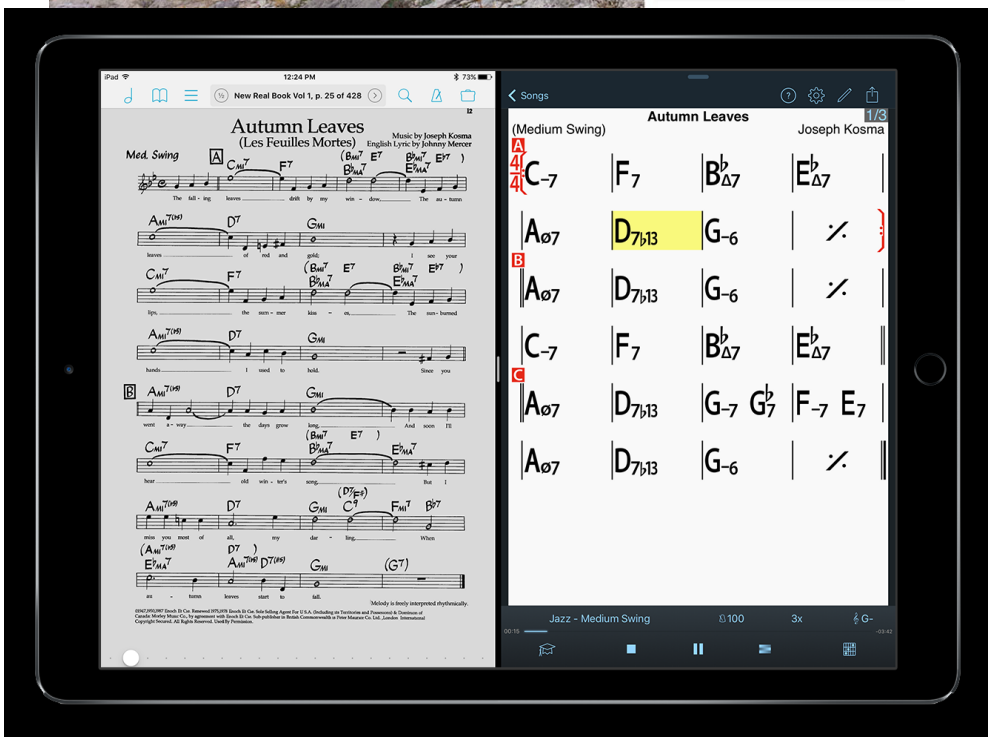
Also there's a possible theme of collective consciousness - maybe not entirely dissimilar to the sharing of images as described in William Golding's Inheritors?

(Another filmic representation of this idea is Sliding Doors (1998), which exploress the butterfly-effect like consequences of missing or catching a subway train by a small margin)

For a plot summary of the film, see https://en.wikipedia.org/wiki/Minority_Report_(film) .
For Sliding Doors, see https://en.wikipedia.org/wiki/Sliding_Doors

Artefect 6- Rockfax / iReal apps





Rockfax and iReal Pro are both smartphone applications (inter alia) which present somewhat interactive codifications of standards in two different domains: rock climbing and jazz music. In relation to the making of decision by humans, they offer an interesting example of the extension of human capacity: it is definitely easier to reproduce both rock climbing routes and jazz standards when you have them charted in front of you, and therefore know they are possible. In both cases grapical forms are used to represent the routes and tunes.

Both rock climbing and music can be understood to some extent as choice archectures, where we choose this note (and not that one); or this hold (and not that one?); and where are possibilities are somewhat defined by codified digital records (memories) of what has gone before. This can be compared to the analogue memory employed by Mal in the Inheritors.....

We might ask if and how novelty and creativity are encouraged in musicians and rock climbers by the use of such appliations: is the cyborg-musican that usings iReal Pro more able to create good original music? Why? Is it a question of how the tools are used (like writing discussed by Plato)? Or a feature of the tools themselves?

For iReal pro, see https://irealpro.com/
For Rockfax digital, see https://rockfax.com/climbing-guides/about-rockfax-digital/