Positive Futures 2030

Powered by Augmented Collective Intelligence (ACI)

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Positive Futures 2030

Solving Tomorrow's Challenges with Tomorrow's Intelligence

What if we got it right?

For once, no dystopian future. These are short stories from a time that has harnessed and augmented the power of collective intelligence, by tapping into the wisdom and creativity of networks of humans – people, us – supported by intelligent machines.

In these possible futures, despite the significant challenges, we have understood how to sustainably improve critical parts of our lives. To get there we turned some of our planet into, literally, a superbrain – and addressed our complex problems with that intelligence.

These stories' objective is to *inspire* innovators – products and services, private and public. They aren't intended to be perfect from a desirability, feasibility, or viability perspective. That would have required much more effort and time. As with all powerful technology, and innovation in general, much could go wrong – from human rights abuse to manipulation.

But *your* expertise can complement Augmented Collective Intelligence (ACI) and its design principles.

Just imagine, for a moment, that we get the "how" right – what could we do with it?

Augmented Collective Intelligence's promise

Intelligent networks are made of large numbers of people and AI-powered machines, connected in a distributed architecture. That's ACI.

From Wikipedia to Reddit and YouTube, from Patients Like Me to Bitcoin and Apple's technical communities, and from Pinduoduo to Haier and Bellingcat, hundreds of intelligent networks help harness the full collective cognitive power of people, organizations, and ecosystems. They complement or substitute traditional, hierarchical structures.

These are superminds*. New organizational designs can capture their emergent intelligence.

Building one means enabling a network – not one person or machine, or a few – to sense, remember, create, decide, act, and learn.

It means helping nodes connect, incentivizing them, and supporting them with knowledge and collaboration tools.

AI can support all of that, by helping nodes to discover each other and connect, curating knowledge, and performing any other computation required.

Here are some examples of what ACI superminds could do in 2030.

* Initially envisioned by MIT Prof. Thomas Malone in his book "Superminds"

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3/3/2030

A sunny morning on a leafy terrace, at the fringe of an old Tuscan village. Just finished my daily, personalized, wake-up routine. I set it up to put me in a good mood, and it works. It is the end of winter, and once again the air tingles with more than a few whiffs of spring. We have had quite a few of these mild winters in the last years. I am looking out at the countryside that has seen too little rain, and on to the sea. The islands in the bay glimmer, far away. Here and there, my gaze meets stripes of forest scarred by the last wildfires. Elsewhere the accelerated regrowth is taking hold. Cat and mouse. But we are getting smarter. Swarm-of-mice smart, if that ever was a thing. As it turns out, swarm intelligence is all the rage now.

I put on my glasses. At my age, they are a good thing. And being of my age in 2030 has some distinctive advantages. I like my glasses; they are my augmented connection into the world – and to other people. They aren't gadgetry anymore. They're superpowers, countering the eventual decline of some of my natural capacities.

The world has figured out how to make older adults live well. Our life expectancy has grown to almost 90 years, and crucially, it comes with a lot more years of healthy life than in the past. In theory, the average could be even higher, but quite a few of us still forget to take shelter on the wrong days, when wet-bulb temperature is unforgiving, and they go without much notice. They say don't want to be nudged by an algorithm calibrated by their doctor - I guess that befits strong-headed generations who felt individual liberty knew no boundary. I catch myself thinking that's a rich-world problem; many in the Global South don't have that choice.

What we are also still struggling with, shamefully, is to make our *younger* adults live a good life, now that we and our parents have planted a big Damocles' sword over their heads. Many environmental challenges stay unresolved, as many countries' governance processes fail to act beyond short-term issues. As a result, our planet is now paying hefty healthcare bills, having failed to spend (much less money) on prevention.

But there's hope, I think in this morning. Things are changing. Today's superminds power is an emergent property of a much bigger and smarter network. *The network is the computer*, some tech company used to say in the '90s. *The network is our collective brain* – that's clear now.

There's no Matrix dystopia in this. The networks in which we live are an exponentially-grown mesh whose roots have been there for millennia. People have always talked to people and used tools to do so. Then came machines that could find, amplify, summarize, combine our thoughts – and when applied to the network, they got us more emergent intelligence.

Where does this go? Who knows. Maybe we will indeed manage to solve the big issues, and live a happier, less anxious life.

Many of us are busy connecting dots of the superminds we need. Let me take you through some of them.

Seamless digital-nomad lifestyle

Being a digital nomad was hyped in the early 2020s, but back then, that lifestyle was not for the faint-of-heart: the administrative burden and complexity was such that only the youngest and those without attachments could manage complexity of moving on a whim.

These days, new services fill that gap: from health support, to life and pension insurance, to reliable tax help; and very professionally run communities "onboard" people in their new location with services ranging from personal networks to shopping tips personalized for you.

Digital nomads start flowing into the real estate's slack left by Boomers' shrinking cohorts in some parts of the world. They benefit from lower cost of housing while replenishing skills in those places.

Cities and villages alike compete to attract the right skill sets and profiles, with dynamic incentive schemes that resemble business–to-consumer services.

Together with the raise of distance-less experiences (like the virtual drop-by and remote healthcare) digital nomads' practical and emotional ties with the rest of the world are not severed anymore.

Mi casa es tu casa

Blockchain enables the tokenization of home ownership contracts. Together with a wave of Millennials taking over real estate stock, that makes temporary home-exchange pervasive.

The new arrangements allow people to live in different places through a sort of barter market, which cuts intermediary and respective costs.

Trust, audit and recourse mechanisms become solid as things scale, weeding out free-riders and antisocial behavior.

Scheduling stays becomes a lot easier, through cross-platform tools that scans calendar availability for direct pairing (I come to your place, you come to mine), or asynchronous pairing (I come to your place, you go to someone else's, and yet another person comes to my place).

Token-holders "pay one rent" (a contribution to the network, offset by the value of their owned assets) and live anywhere.

A good place to settle down

The formation of old-age communities in attractive locations is being encouraged based on personal profiles. An algorithm trained on personal history and stated preferences, and aware of local communities' incentives, suggests which locations are the best fit for you, your family, and your friends.

Quite a few algorithms deliberately introduce diversity, to prevent social bubbles. The science of "diverse compatibility" has also improved, enabling a better understanding of how very different people can enjoy each others' company.

Residents can time-share housing in those communities and rotate through some of them, paying one rent for all of them, or reside in one permanently.

Immersive virtual drop-bys

People can now visit virtually at their friends and family's house through immersive augmented and mixed reality. That's thanks to ubiquitous and cheap data networks and cameras, and intuitive scheduling that notifies user when others are open to receiving their virtual guests.

We also use 3D models of individual people, instead of attempting to capture the entire body on high-definition cameras. Edge processing is strong, and data's carbon pricing encourages cutting the transmission to what matters to recreate a virtual twin - not unlike MP3 sound thirty years ago.

Annoying parallax effects used to limit real emotional connection: you could not look at people in the eyes when looking at them, because the camera is elsewhere. They are now solved thanks to new cameras augmented by AI that make people experience real eye contact. That matters.

This is a good way to spend some time with faraway grandchildren or friends, for instance.

As it turned out, this is also a good activity for people recovering from illnesses, both at the hospital and at home. Part of the health outcomes struggles are due to the loss of social connectivity, and a quick telephone call isn't comparable to the immersive experience you get with the drop-bys.

Haptics is the next frontier, but they are still fledging, enabling only some limited sense of touch at a distance - for instance, an ill grandparent can theoretically already hold hand with their grandchild using special, and still expensive and clunky, devices.
A bit contrived, and there are more straightforward use cases, but this space is fast evolving.

Your life's story, enhanced

It all started with Figma and other AI making it easy to retouch pictures. Then AI transformers made text-to-image possible. Now, memories accumulated over a lifetime, pieced together from fragments surfaced by a network of people, are enhanced (e.g., 3D, animation) by AI assistants. Their owners can now immerse themselves in their emotionally rich past.

Personalized experiences are available. For instance, the elderly see more family or old friends' memories.

All of this is consensual and based on a strict "right to be forgotten" rule, meaning that the algorithm removes references to people who don't want to be remembered in general, or in a given context (e.g., together with specific other people).

In the 2020s we started understanding that beyond a point, buying things doesn't lead to happiness - but buying experiences, especially if socially shared, could.

Ten years later, we embrace what that really means.

Our coffers of digital memories is the gift that keeps on giving, together with the underlying network of people those moments were shared with.

Data commons for innovation

Autocratic countries have for a long time used data forcibly sourced from virtual and physical spaces to train their algorithms.

Democratic societies have noticed that their technology is handicapped and have reacted by setting up stringent (and technologically enforceable) methods to ensure that data can be sourced extensively but anonymized in ways that prevents damage to those who supplied it.

For health data, we took the example of Google's Street View, which for a long time has been obfuscating faces and places as needed with automated workflow for the requested changes.

Better-informed regulations also helped, as they put providers and consumers of data on the same page for specific use cases (e.g., health insurance) in a predictable and enforceable way.

People now also receive rewards when their health data is used for research. Those incentives are both intrinsic (such as participation in citizen science rallies and related status), and extrinsic through tokens that become valuable when the respective data models are used successfully.

Distanceless doctors

Healthcare finally extends its reach through hub-and-spoke, and sometime peer-to-peer, networks.

Smaller villages benefit from telehealth checkups, while simple remote interventions happen in larger villages thanks to paramedics using augmented-reality devices and supported in real time by doctors.

In larger towns remote surgery is made by the best surgeons aided by AI, irrespective of where they are.

The large number of experts in the network means that any (extremely unlikely) data-connection vagary triggers a handover to someone else who can keep things going.

Networks of doctors and paramedics, supported by intelligent machines for triaging and knowledge management, now cut the wait times, reduce doctor's burnout, mitigate the problem of lack of nurses in high-density locations, and ultimately improve the consistency of healthcare delivery at much higher scale and reach.

As a side effect, many surgeons and elite healthcare specialists have started moving to beautiful locations close to high-throughput data hubs. That seems to help with the burnout.

Loneliness and forgetfulness, revisited

It used to be in classic movies (like “Her”) and we rightfully worried. After some fits and starts, now AI talks to you based on the fine-tuned model you help build.

It can remind you, or nudge you, to do what you wouldn’t feel like doing alone (say, exercise first thing in the morning).

It can suggest to do a virtual drop-by at the right time with the right people (those who seem to improve your biofeedback, for instance).

It can provide answers like those your coach, your spouse, or your best friend, would have likely given you, in the tone they would have used.

Lots of room for abuse, but worth trying, because loneliness has been an epidemic for decades now. Old people die because of it, and younger ones suffer.

AI assistants based on a corpus of data collected over the life of a person can converse with the elderly on anything - from the location of that great anniversary’s restaurant, to where the car keys are typically kept.

Families share memories in games at social events, for instance reenacting situations. This helps AI learn how a someone would respond in specific circumstances.

Memories brought back to life keep stimulating a sense of meaning and connection, even when very few real people could remember those moments.

Not our parents' emoji

I get a notification, a spatial sound that moves from the back of my head to my left ear and then to my right, and fades.

One of my daughters is starting her day, and she sent her mom and me a 3D emoji that looks like a sunrise. She probably told her phone what she wanted, and its transformer did the rest.

But I can recognize her style - which serves as a template for the generative AI to build on. The stylized sun climbs over the hill to my left side and then evaporates like dew. Some of her friends have perfected the tone of those images, and they share them with each other, and now me.

And the artificial barrier between image and sound is broken by generative-AI-supported soundscapes. They enhance the emoji experience, with music and soundscapes matching the joint preference and the common history of sender and receiver. The best ones induce a sort of synesthesia which keeps improving as my biofeedback is considered for the next iteration.

AI-assisted emojis are a new language, and people of all ages speak it now.

On augmented-reality wearables they use all sorts of context-based animations, making them the ultimate social meme, and ultimately add a touch of naive art to everyday interactions.

Stand by me

Communities are the ultimate defense line for people in need. People's mental health is now supported by their neighbor (or friend, colleague, and clearly family) at scale.

Public and private social and healthcare services, are latching on to the trend.

Be it depression, anxiety or just solitude, virtual and in-person communities support people on their bad days.

For example, there's less involuntary loneliness now, but you can be alone if you want or need it. People are nudged to connect with others based on mutual needs, but without too much detail. Privacy is important, and discretion is possible.

Psychedelics therapy – especially in community groups, both virtual and in-person - has also taken hold, thanks to lots of new research and younger generations lacking the respective cultural taboo.

As a result, traditional antidepressant's use, while still important, has abated, and many people have found part of their vibrant self again – especially when connecting with others.

Individual well-being depends on the collective, and the collective is now enabled to act on it. At the same time, the literal mental health of the *collective* benefits from healthier people, and certainly from mitigating despair – as attested by the reduction of crime rates, and the slightly saner electoral dynamics we have started to see.

Your song

Using generative AI, groups of people now write personalized birthday. wedding or any celebratory songs for their friends replete with context about the recipients' life, as well as being easy to listen to. And yes, the occasional serenade is now being made by these tools.

Mariachi bands have adapted to the change, and turned themselves into orchestrators of the AI dialogue, for premium results and, whenever possible, an in-person or live-music delivery.

Like with old-days social media, this is not an unalloyed good, because abuse such as retaliation is possible and made more scalable.

The regulatory framework related to the right to be forgotten, as well as libel and in general cyberbullying is made more enforceable by a first layer of AI-driven control (such as words, sentiment and meaning) as well as specialized content moderators.

The models are open-sourced and scrutinized openly, to make them stronger but also enable an early detection entry points for adversarial model generation that could elude AI controls.

More-human local communities

We still like to meet in person, a lot. Those are good ties being (re)kindled.

Some family lives nearby, but farther-away relatives and friends now come over for extended periods: they can combine some time off and flexible work location as they don't need to commute into the office every week.

Villages and neighborhoods use algorithms that generate a "community togetherness score", which calculates your probability to find people you like in the area, so you can bump into them in the street. You can even get a score (within privacy limits) for a certain time of the day, and place.

This is a form of knowledge graph, and it at its best, it discovers unusual affinities. For instance, people who do unrelated things in life can still like each other, and machine learning finds that.

And some communities, increasingly encouraged by diversity & inclusion regulations, introduce some deliberate "noise" to prevent echo-chambers.

Realistic virtual travel

The time for realistic, immersive, and pervasive virtual travel has come. Pent-up demand for travel, and carbon pricing that makes long-distance travel expensive made us truly creative.

Now people can share crowdsourced 2D pictures that are converted into 3D by specialized AI which then serve them up in augmented, mixed or virtual reality. Enhancements by talented creators are ubiquitous, making hyper-realistic experience a form of art.

Machine learning can connect additional dots by understanding the reaction to experiences, and surfaces uncannily interesting recommendations - some of them mood-based thanks to wearables' biofeedback.

Experiences are shared with others, synchronously or asynchronously, as it makes them more salient.

Contributors are incentivized through (regulated) travel cryptocurrency which vests them in their long-term commercial success. Credits are redeemed against other virtual travel access (premium content), or for real travel. And in some cases, exchanged with hard cash.

Tourist areas continue to make money through a cut on the revenue of premium content, and some have started levying a tax on content produced, especially real-time feeds taken through stationary or moving cameras and sensors.

Space agencies have plans to partially fund some of their research missions through virtual travel businesses.

The next frontier: realistic haptics, and a sense of smell. Still working on those.

Social media 2030

Social media had gotten worse before it had gotten better. Nobody was happy. Not the public, who felt alienated by the tone of many conversations, and saw little exciting new things. Not the public institutions who were constantly caught on the back foot with new, unforeseen, nasty developments. Not the tech startups, stymied by too much incumbents' entrenchment. But also, not the large social media companies who felt singled out as the new public enemy.

Until something changed, or at least it did in a few countries.

Governments started taking some technically savvy actions, and not just heavy-handed ones. The introduction of mandatory "noise" in people network structures broke the info-feed monoculture of many groups. Algorithmic speedbumps slow the spread of suspect viral posts. Some level of user anonymity was foregone, in exchange for audited due process that avoids KGB-like surveillance.

Detection of risky dynamics and content is not just devolved to individual companies' internal policies. Rules of responsiveness have been enshrined in new laws. Content moderation, for instance, now has a thoroughly end-to-end process starting with publicly-approved algorithmic detections, human reviews, and expedited private and public action. And the fact base is easily auditable.

Portability of personal graph is now a right, enabled by open-sourced platforms that help users easily port their network structure and content preferences to another social media company. Interoperability is also widespread, so I can cross-post and follow across platforms.

All these algorithms are publicly accessible and can be critiqued – and changes suggested – by the public. Governmental committees responsible for the changes, collaborating in a global network, are staffed by competent people from media, policy, and technology.

Heavy fines hit companies that use the algorithmic transparency for unfair financial gain, or manipulation, with a legal fast track for escalations and trials.

More solid legal boundaries and increased competitiveness have proved a boon to the companies involved in this sector, enabling them to try new and bigger things, and attract new talent.

From truly personalized information Smartstreams to social-media-fed generative AI, from 2D graph visualizations of the discourse to emotionally supportive networks, innovation is back. The public square is buzzing and contributing to the world's collective intelligence again.

Still an unfinished job, but we have come a long way from the constant bouts of collective stupidity, and the frequent collective insanity we used to experience ten years ago.

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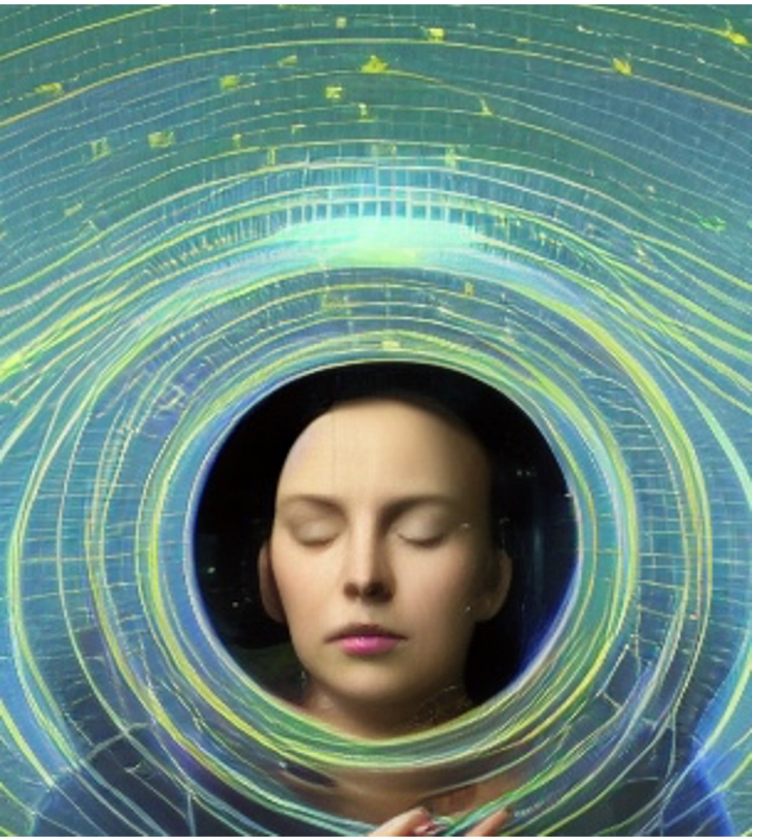
Smartstreams



I open this morning's smartstream. I am interested in regenerative agriculture, and the personalized AI curator summarizes what people in comparable climates have done in the last weeks. So much time saved, this is magical.

Smartstreams provide curated content and identify relevant people to follow and engage with. They are an offspring of the old social media and have made up for their forebears' spotty track record. I can finally truly configure my information diet and be on top of the latest.

It is now easier to engage with people in fields I care about, because noise (trolls, uninformed opinions) is filtered out.

However, to prevent insularity, it is now a legal requirement for service providers to "mix things up": the algorithms must inject some dissonant opinions - if they're civil.

It is not too hard to do that, now that we have understood how to combine natural-language search with the network signature of "dissonant voices" for a given topic, including the most arcane ones.

We now do pay for quality content, instead of assuming that good content should be free. Governments and private catalyst capital have finally stepped in to subsidize a minimum of quality content for people who can't pay, especially so for sensitive themes.

Smartstreams curate, but also transmit questions. Within companies, smartstreams convey the questions asked by other colleagues: they are auto-tagged and routed to the right people automatically, instead of requiring insider knowledge of the firm. Some communities have enabled that feature across all members, irrespective of the organization they belong to.

By law, Smartstreams must notify users when they seem to be inducing signs of addiction and dependency. My wearables combine feeds from my eyes, my brain, heart, blood, adrenaline and other signals and tell me, at first softly and then firmly, that I am overdoing a couple of rabbit trails this morning.

Search 2.0

Smartstreams are complemented by a new generation of search engines – the recent bit of progress I am most thankful for. Some of the technology has existed for a few years, but wasn't seamlessly combined, and wasn't monetized effectively, resulting in unhelpful bias towards what advertisers would find useful. No more. Or at least, for the premium search engine that many were waiting for.

I formulate my question, and the natural-language AI coupled with a deep knowledge graph helps me rephrase it to avoid blind spots, the way an expert librarian would – a librarian who knows the domain I am searching, for *every* major domain.

Then, the engine breaks down the semantic and symbolic space of my question. Concepts are mapped in a two-dimensional space, so I see insightful adjacencies.

Caring about the question is as important as caring for the answer. AI helps there.

Then, some more magic is in store. The engine summarizes the results for me and gives me highlights and synopses of the main sources for the answer, e.g., scientific papers and reputable articles – including information about unresolved disputes. It displays results in a two-dimensional graph, so I can look at the periphery, where inspirational, edgy nuggets lay.

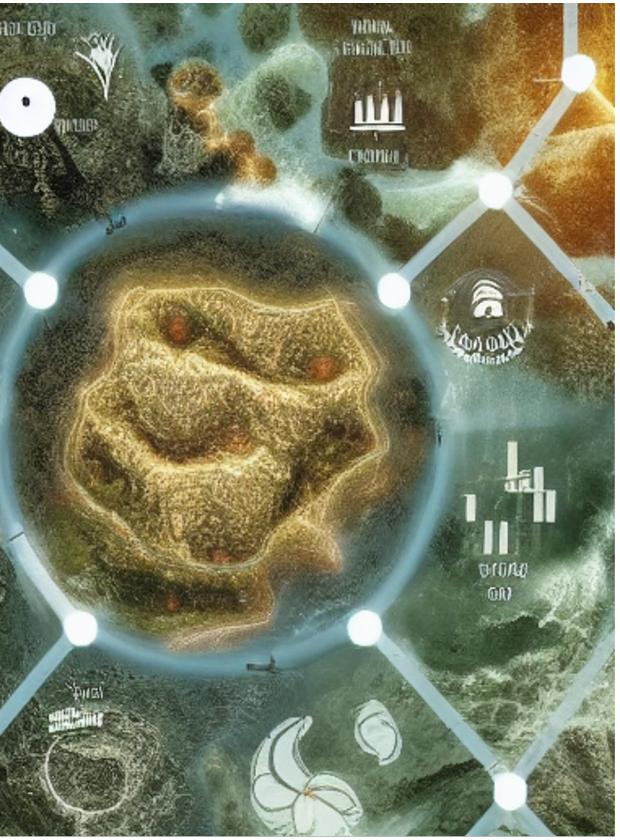
The engine over-indexes credible information both through what is said (triangulating it across sources) but also based on who says it, and what the web knows about that person's (and their network's) credentials.
If I override that setting, looking for more maverick views, the engine tags results with a reliability – and possible harm - score.

Next, it displays the underlying network of people and organizations, and asks me if it should post my question to them. Last, I add some of it to one of my Smartstreams, to track the developments.

Some of this was possible within enterprise networks earlier, but not across the entire web. Much paywalled research is also now searchable, thanks to a combination of free preprints, philanthropic capital, and public contributions to the knowledge commons. Language barriers are now irrelevant, as everything is translated.

The offshoot? The cycle of invention-to-scale is shorter. And hyperspecialized knowledge communities are being built on the search APIs. For example, an array of climate-transition superminds.

An environmental hive-mind



Today, networks of data scientists and research institutions cooperate at large scale to create better models that predict hyper-granular events - such as risk of forest fires or loss of agricultural yield - based on very specific local conditions.

Equally hyper-specialized new knowledge from relevant fields is curated by AI and relevant communities into Smartstreams, to help others stay up to date.

An example is community-based forestry for specific climates and soils, so that we avoid the early mistakes of well-intentioned but naive communities planting trees at scale ineffectively.

Scientific and laypeople's contribution is incentivized with Web3 tools that facilitate funding, and through natural-language algorithms that give credit beyond direct citations.

Networks of relevant people are connected by AI which now strives to weave together contributions from adjacent fields. For instance, Arduino-devices communities are now more tightly connected to data scientists, academics, and citizen scientists. This enables the faster deployment of the right instrumentation, and at lower cost.

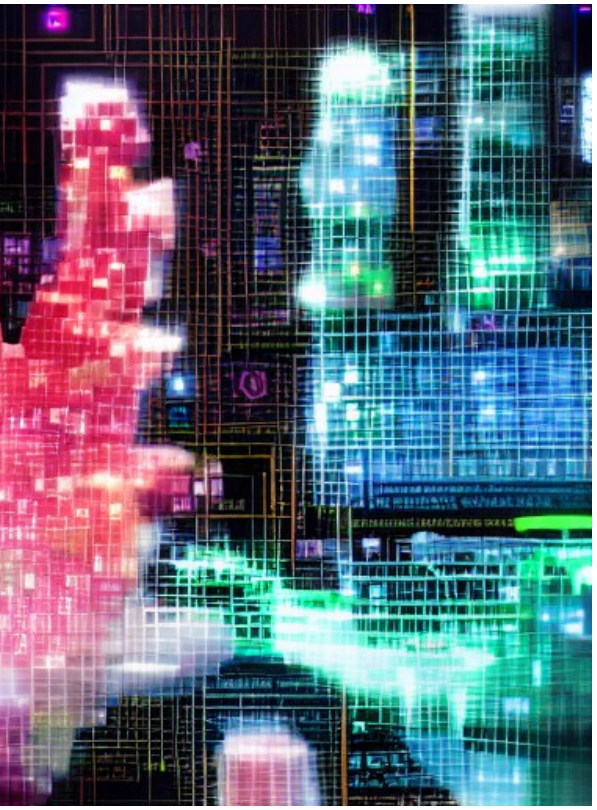
AI mines legal and regulatory knowledge. New guidelines are immediately visible to others around the world – and initial legal summaries for review by lawmakers are drafted language models fine-tuned on those specialized knowledge corpora.

And laypeople use the corpus of knowledge to engage deniers through network-trained NLP extensions of their own social media accounts. Controlled for facts and tones, this is an effective defense against climate trolls.

In general, the social, scientific, legal and economic experiments happening in various part of the world are now surfaced by more accurate search engines. Foreign language is efficiently and accurately translated, to remove local barriers to the consumption of the most relevant and recent knowledge.

As it happened for other knowledge Commons, catalytic and philanthropic capital from private foundations and impact investors triggered public funding of specialized superminds. Reading this signal, the private sector, as well as financial markets, have started rewarding valuable contributions to sustainability knowledge.

Climate's public-opinion engagement



Institutional change (public bodies, private companies) is driven by public narratives. We know that institutions must feel a unified pressure from their "customers" to act at scale.

But in the early 2020s social media strengthened mis- and disinformation, seeding confusion and doubt, making fringes feel mainstream. Balanced views were bullied away.

We knew that the solution was to engage with deniers at scale, showing the fringe nature of their views without condescending them or lowering civil debate standards; guide misinformed audiences with majority-backed facts and empathy; enable and strengthen activists; and turn passives into moderately active advocates.

But it used to be exceedingly hard to do with conventional means.

Until a few young folks, armed with natural language models and open-sourced knowledge, built digital climate experts able to engage with deniers, misinformed, concerned passives and climate activists. They called them "AIxtensions" (AIX), augmenting people's ability to engage. The objective was a levelled playing field for fact-based discourse, disrupting dysfunctional social media: a "high-leverage point" in climate dynamics.

Every activist now uses a personal AIX to engage deniers. AIX gives activists a lists of targets, social threads to tackle. AIX uses a personalized data corpora to fine-tune and generate copy text choices that are fact-based, references-rich, empathetically worded (for individuals) or cold-facts (for institutions). Then, it releases the chosen message on behalf of the human, from AIX's account to shield the person from trolls.

Because it works together with people, it is a human augmented by AI, not just a bot and can be registered as such on social media networks.

Passive majority uses AIX with misinformed people. AIX provides them with daily activities based on their revealed preferences in their social media diet. It empowers and connects.

AIX harnesses the informed-majority's weight, so far underweighted by social-media algorithms, to crowd out deniers and their trolls and bots. It channels the collective intelligence of science and civil-society networks: a "climate supermind" to augment individual activists and help passive-majority organize. It is an exoskeleton, a superpower for civil society.

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Supermind-writing

Generative AI has triggered an explosion of creator tools. Many of them, of a magnitude unseen since the printing press and the internet (and its hypertext), have been in writing.

Natural-language models had been able to generate, summarize and paraphrase text for some time. But now things are different because networks, not just individual people and machines, are in play.

First, a lot of writing is a recombination of metanarratives existing in large networks and embedded in Smartfeeds. You take concepts, you recombine them, you add to them – all AI assisted. The borderline between writing and smart curation (and recombination) is becoming blurred.

The authors I follow on regenerative agriculture, for instance, are sourcing many ideas from the narrative in the network, using AI to structure and combine them. Then, AI helps authors critique those ideas, kick tires on their logic by exposing conflicting or illogical viewpoints. And finally, AI helps people write prose that is more compelling, succinct, and informative. But humans are still in control of the output – and they label their product accordingly, to differentiate it from pure machine-generated text. Also, to avoid deepfakes, important language is triangulated with verbatim excerpts, stored on-chain to ensure their integrity.

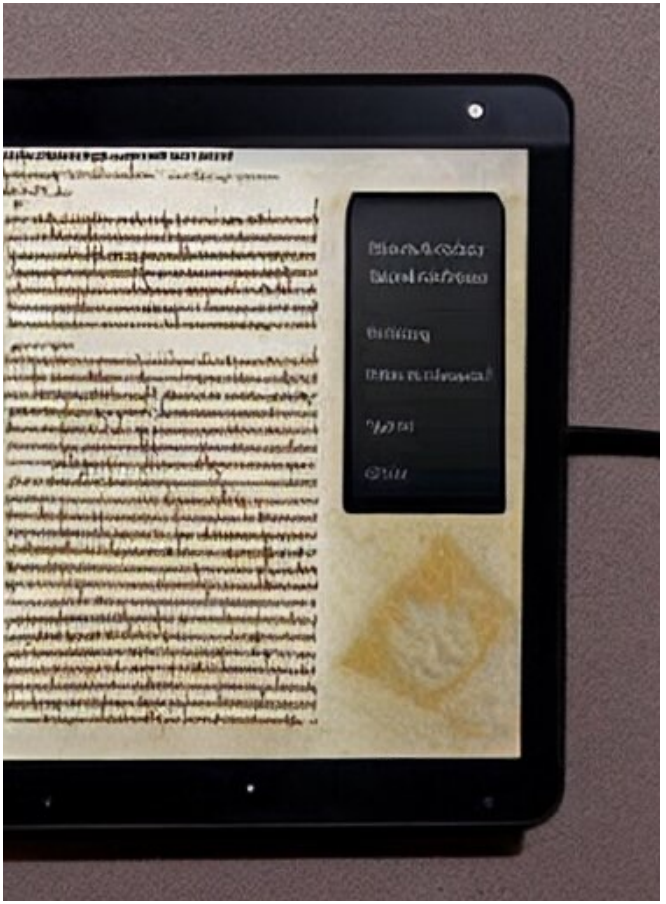
People can share their text corpora, including the corpora of the people (and machines) they are connected with. This composite authoring takes the concept of co-authoring to a new level: a sort of “quantum entangled” brains writing together.

But original thinking isn’t suffering as much as we feared it could: augmented collective intelligence (ACI) is also used to ask questions and critique writers’ output to spark creative thoughts. It is like having an entire diverse team of smart and cross-disciplinary colleagues picking your thoughts apart, and continuously adding new angles.

Ethical concerns about copyright and abuse of free speech abound, and are being addressed by crowdsourced ideas and responsive public legislation. Another cat and mouse game, but one that’s worth playing.

Language is code for human systems. We have started writing that code at a speed and granularity we have never experienced.

Gutenberg, personal computer, HTML, living books



For nonfiction books, we don't want to go through hundreds of pages of linear text, just like we don't want to someone speaking for six hours in a row anymore.

Many of today's books provide different paths for their exploration.

The book's structure is shown at first in a two-dimensional graph, with the interdependencies between its parts shown – not just a linear table of content. The book shows you a suggested reading path, based on your stated preferences (e.g., time available, and your knowledge of the topic), but you're free to take a different one. The book then gives you a "diagonal reading body" based on your preferred path, so you can get the gist in a time manner. AI generated imagery – both from the author(s) and curated from readers - complements the reading.

Next, you can go into more detail in sections that interest you the most. And you can follow the intelligently-combined suggestions (formerly known as highlights) from previous readers.

The writer's narrative fully comes through at this stage, whereas much of what you have read as an overview is an AI-refined summarization.

Another new capability that many of us have come to love is the ability to ask the book questions. This is not just "search", or the engaging but often inaccurate natural language production of earlier language AI models: it is a proper question and answer experience, within the bounds of what the book says, and with some "peripheral vision" into the content that is referenced throughout. Authors also update the content based on the emergent queries.

If that doesn't satisfy your query, you can always resort to branch out into search 2.0 tools.

In the early 2020's we realized that we had the basic technology: AI language models; knowledge graphs that capture content, semantics, and underlying people networks.

The new AI tools made it easier to train specialized models, with human and machine reinforcement. Networks of people work on that reinforcement, effectively creating a vibrant ecosystem around topics, and blurring the boundaries between authorship and readership.

Of course, some of us, some of the time, just like reading books tip to toe. Some good reasons to do that still exist.

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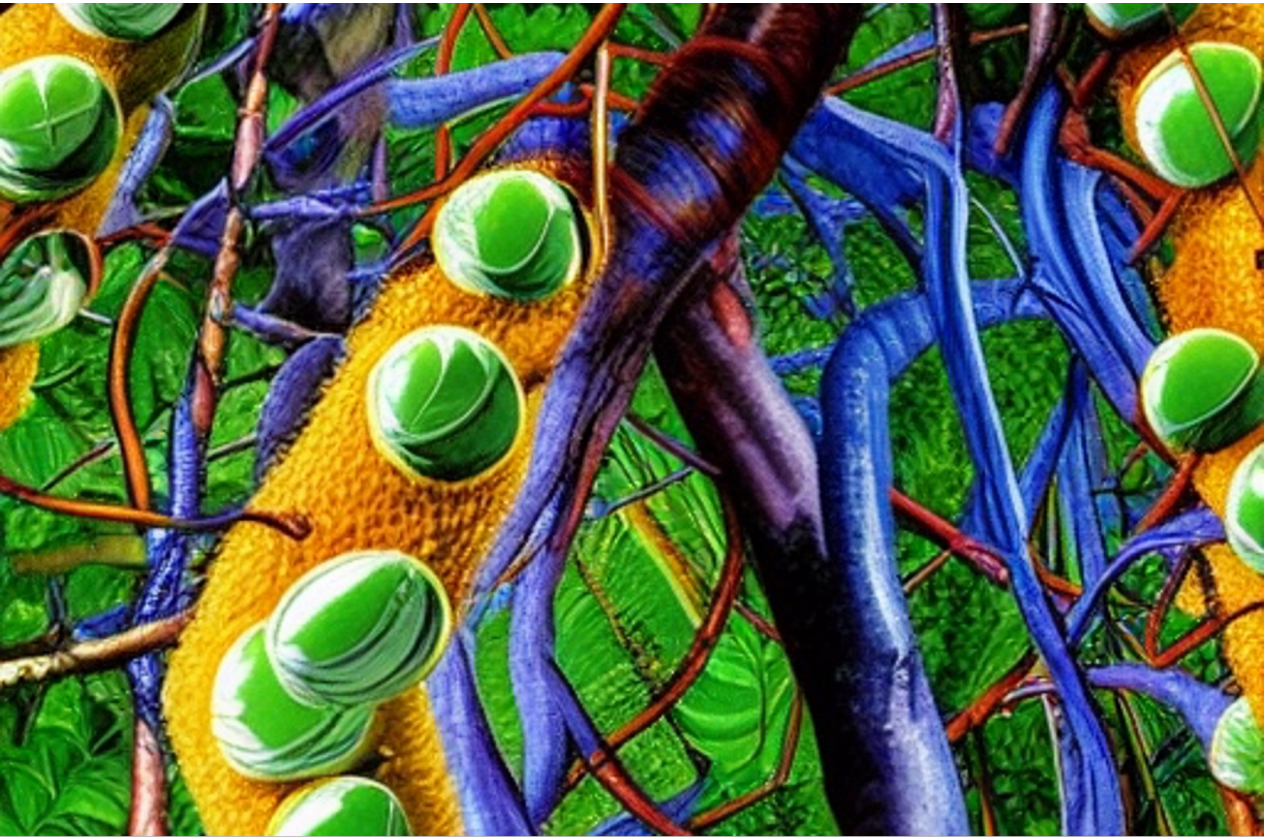
Trans-species intelligence, R&D



James Lovelock would have liked it: biological ecosystems' "natural experiments" are increasingly used to discover what works in our manufacturing and other man-made spaces.

Nature's biological networks themselves are also directly used to manufacture materials, taking biotechnology to the next level. The jungle, among others, has become bioeconomy's code base.

From a food revolution to self-healing construction materials, ecosystem's complexity is being harnessed by networks of scientists, manufacturers, and citizen scientists.

We have also started using nature as a sensor: insects, birds, and other animals' signals, as well as plants and mushrooms', are detected by ubiquitous (and often open-sourced) sensors. And their input is constantly triaged by AI to generate timely and accurate alerts, thanks to networks of scientists, including citizen and data scientists, who build increasingly accurate prediction models.

For instance, we now detect the onset of parasites' epidemics or water-table scarcity well in advance, helping prevent the worst consequences.

Natural ecosystems' parts increasingly help each other in sensing, remembering, creating and learning the new art of the possible.

Yes, In My Backyard

Wind turbines and other large renewable-energy infrastructure, turned into physical and digital artwork, have put a dent into NIMBY (Not In My Backyard) opposition.

Famous artists contribute extensively, as do crowdsourced creators. The best works are often voted on by local communities or Eurovision-type contests.

Some designs are implemented through robot painters and 3D printing. Some others put up incredible light and sound shows at defined times – or when they sense that there's enough of an audience. Gatherings to encourage extempore shows have become commonplace.

Others use augmented or mixed reality, through a smartphone or a tablet, displaying unique and personalized patterns accessible only to those who have supported the project.

In some places, truly outstanding work is turned into attractions – both physical and digital where visitors don immersive high-end augmented and mixed reality devices.

From video games to art exhibitions, the real and the virtual stimulate the senses and win over naysayers.

Swarmsight

People operating in teams can now sense, and especially see, what their colleagues perceive, enabling a sophisticated “composite situational awareness” and improving coordination and resulting group performance.

The advent of cheap cameras and ubiquitous wireless connectivity enables this capability both in urban and remote environments.

AI supports the triaging and prioritization of video feeds to avoid information overload for the team members, automatically adjusting the volume fed and maintaining the right balance of focus and peripheral vision.

The first heavy users swarmsight were defense and law enforcement forces, as well as professions that deal with complex physical environments, such as construction and critical-infrastructure workers. Forest rangers and firefighters have also started pilot projects.

Other use cases are slowly emerging, for instance in travel entertainment such as swarm bike races, and mountaineering.

Ending manual-trades shortage

Remotely-located handymen, builders and installers have ushered in a revolution for skilled manual-trade services.

Using mixed-reality and other immersive visualizations now commonly available on normal mobile devices, “command-centers” employees, as well as fluid marketplaces of highly skilled and experienced (and often older) specialist workers can guide field operators.
The latter are something less experienced, or are generalists, but have strong physical dexterity.

Ubiquitous 4G and common 5G networks enable real time collaboration.

Video footage of jobs performed across the network, appropriately curated by AI, is then used for knowledge management. This makes it easier to train people, and enables command-center employees to swiftly access solutions of rare, complex cases. Generally, training happens through communities of learning that tap into those knowledge bases. And all happens in the flow of work, without requiring people to take weeks off work.

Haptics, the ability to touch virtually, are still a bit tentative in 2030, but something works already e.g., to help remotely sense the stiffness or texture of materials and components.

Hybrid autonomous driving

In many cities, 5G networks allow public transport to be operated by remote drivers coupled with AI, improving safety, convenience, and reducing costs.

Quality control is enhanced by crowdsourced, distributed professionals that review datasets of potentially dangerous situations flagged by AI and bystanders.

The old debate about the feasibility of safe autonomous vehicles has now died out, because this hybrid model works way better in practice, and it is much easier for people and lawmakers to digest.

Sharing anything

Many communities have started owning assets collectively: from gardening to home improvement tools and beyond, including car ownership in centers that are not served by broader ride-sharing fleets.

One advantage of small-network sharing is that participants treat the assets more carefully, because it fractionally belongs to people they meet every day. The general upside is that most assets will not sit idle for most of their time.

Personal-network identification, as well as data analytics to make people pay for the assets and their maintenance, are facilitated by consumer apps. Increasingly, part of it is built on-chain to ensure its integrity.

Skills and time barter is also happening, with skilled time being traded in purpose-built marketplaces.

Accountability through collective memory

Blockchain-encoded media records, fed by natural-language models, memorialize big decisions and statements made by prominent people. It is hard for private or public personalities to hide what they said or decided, or to ask for internet records to be deleted. Data is not just sourced from individuals' public declaration – it also uses knowledge-graph to mine what has been said by connected people and organizations.

Hyperspecialized "halls of shame" are curated by AI and people – a 2030s extension of Wikipedia. For instance, the lineage of narratives for everyone involved in deliberate obfuscation of climate science is in plain sight.

No privacy (e.g., the old GDPR) protection applies here – this is memorialization of public or publicly available statements, acting as a dissuasion against anti-social behavior.

Some of those people have passed away, and some are hiding - though that's not that easy today, especially after half of the developing world's secret services (and OSINT volunteers) are after them. Others are making up for their past and helping the change.

What is most important though is not keeping individuals accountable for their past: it is to give others an incentive to steer clear of messing up with the future.

Assessing public figures' stance

AI helps knowledge graph technology to mine public information and create a full picture of politicians and other prominent figures, helping the public understand their pro/antisocial stance on key topics.

More generally, the same technologies, combined with Web3 tools and and network analytics make it easier to assess people's credentials, especially when they want to make potentially controversial statements.

Those statements are then labeled on social media platforms based on a composite credibility score. The algorithm for that score is open source, and subject to public debate resulting in continuous upgrades.

Curbing the threat of deepfakes

AI-generated deepfake are by now often undistinguishable from reality, at least to the untrained eye.

This is truly a cat-and-mouse situation: dangerous memes threaten the stability and cohesiveness of civil society, especially in vulnerable groups and nations.

A combination of AI, crowdsourced experts and professionals, and legal enforcement (such as labeling of information, and prosecution of illegal activity) limit the propagation of dangerous and dangerously-realistic content and help rebuild trust in internet information.

At the same time, network analytics lend a hand to governments enforcing new free-speech conventions. Breaking up social media bubbles and bringing diversity to networks has become mandatory and implemented through AI-supported law enforcement.

Algorithms also predict the likelihood of civil unrest due to viral, dangerous content – and slow its propagation in the network to avoid achieving uncontrollable critical mass.

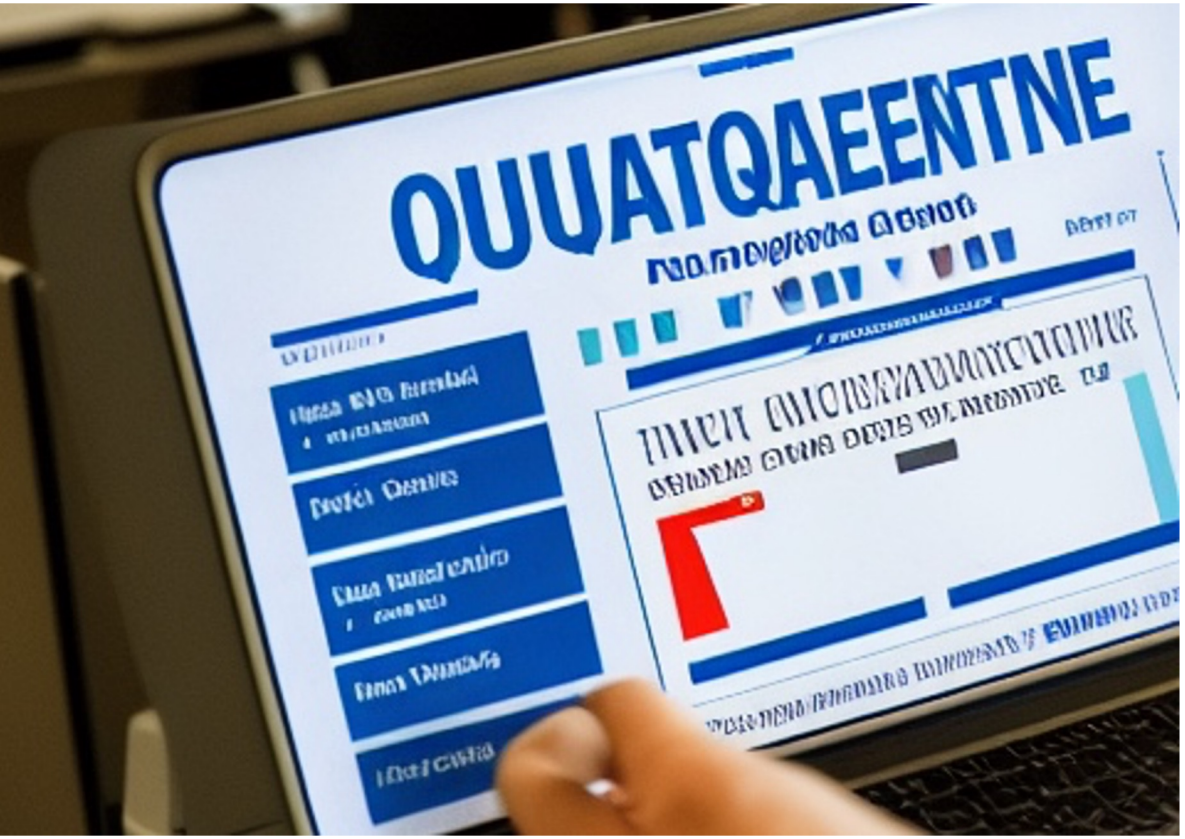
Broad-based lawmaking

Much democratic legislation now takes continuous advice from communities of experts, as well as qualified citizens chosen through sortition processes.

Those contributors are selected partially through AI-powered search and credentialization tools, and generally through thorough calculation of the representativeness of the group.

The process of debate and decision, and the respective proceedings, are documented through Web3 tools and made accessible to the public to ensure civil-society oversight.

Informed voting



AI exposes people to more broad-based opinions in real time, which reduces group-induced biases and the formation of fact-distorting bubbles.

The algorithm facilitating such exposure uses knowledge graph technology to structure the content and help natural language summarize it – and make it easier to engage with it. It also uses network analysis to weigh opinions not just in terms of volume and viral propagation, but also in terms of actual representativeness across the citizen's network.

This ensures the representation of minority views but avoids polarization of the discourse along extreme positions.

Natural language models built on (fine-tuned on a corpus of) a political party's detailed values and content platform continuously engage with the electorate. For critical topics, they present a natural language answer, but also highlight the original text. Their objective is to explain, and obtain additional input from voters.

All AI-supported summarization and engagement services are a public good, are open source, and are continuously critiqued to ensure their evolution.

When urgent issues arise, for instance close to election days, the discussions are escalated to human experts that collectively confirm or infirm the model's answers. Indeed, some moments are still testy.

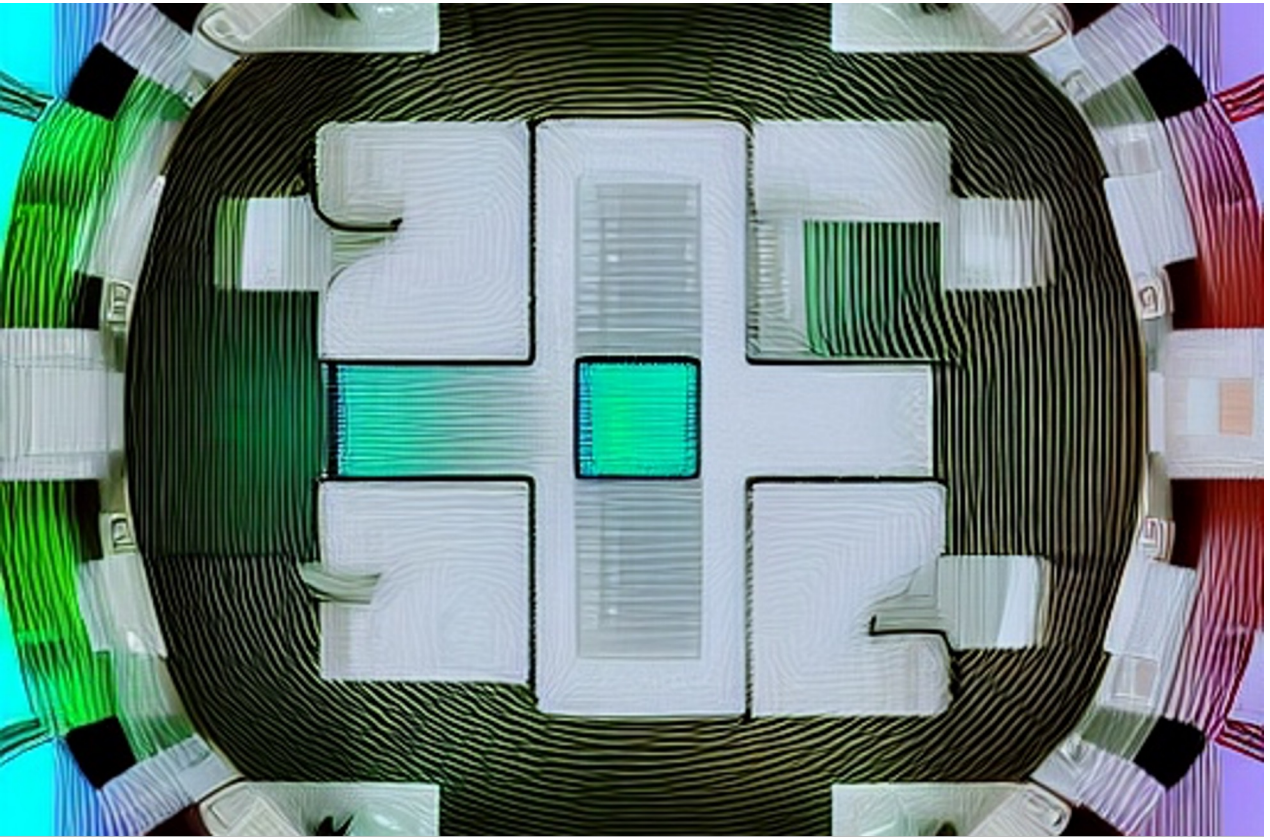
Young intelligence in power

Younger generations are finally taking power away from the older ones. Not a moment too early, as the demographic shift had fostered short-term thinking and conservativism that offset the valuable experience of seniors. Now the long term has become urgency, and younger people, from the younger Gen-Xers to Millennials to Gen-Zers, are seeing the results of not changing things fast enough.

The opinion of network *clusters* that include a high proportion of young people are more seriously considered in any long-range policies today.

For a few topics, people hold votes based on how many years they're expected to live – for instance my vote counts less my daughters' when it comes to allocation of resources for environmental restoration, or retirement funds planning.

Effective law enforcement, Orwell-free



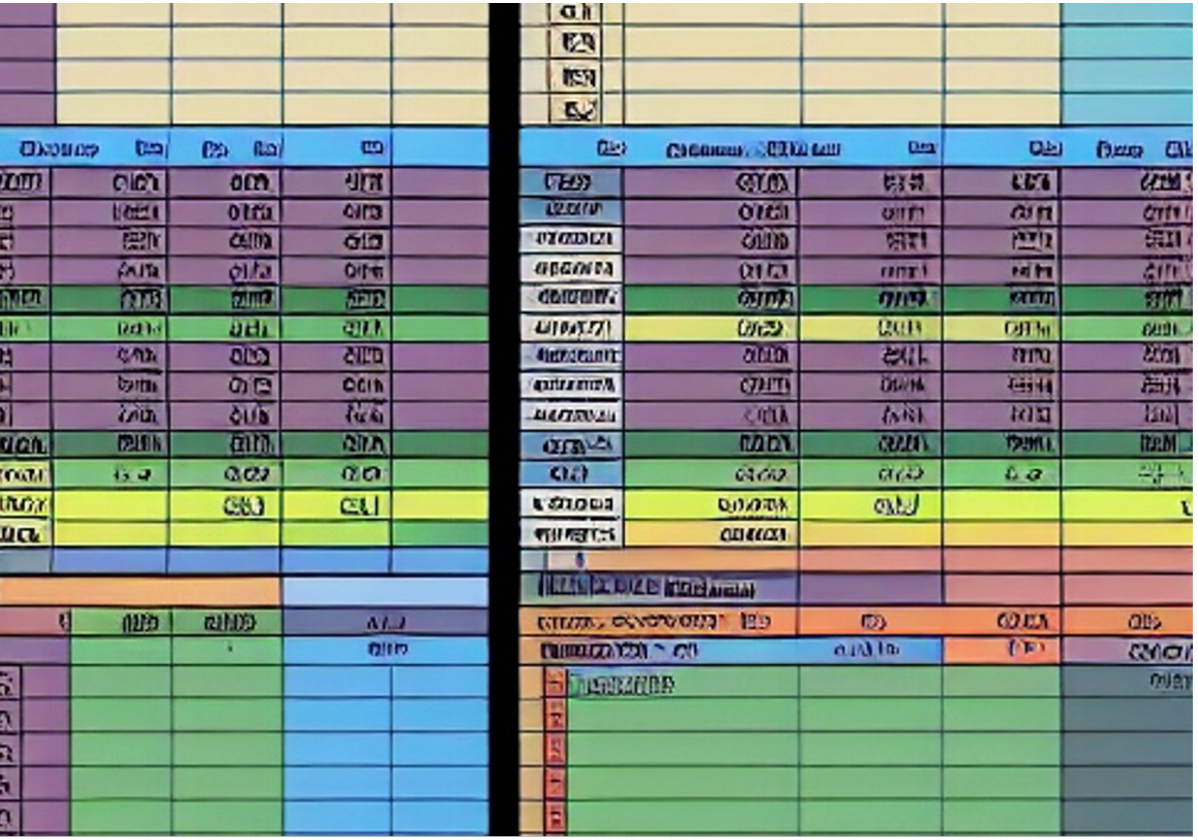
Many of our collective-intelligence activities are subject to abuse.

A combination of AI and human sleuths are now patrolling the virtual space, which could open the door to digital, state-endorsed Orwellian control.

To an extent, that's always been the case: police was invented and then misused by tyrants. In advanced democratic states, the risk of abuse is controlled by supervisory bodies that conduct forensics and make much of the data and respective decision algorithms publicly available for citizen critique.

The exceptions to this open-source mechanism are few, and scrutinized by security-cleared publicly-elected representatives.

Science fights its reproducibility and bias problem



"Boring" scientific results are now idolized – and incentivized.

Researchers were typically rewarded for publishing only what works. That created bias, fostered excessive caution, and discouraged the publication of things that *didn't* work - preventing others from learning from failures, mistakes, or simply dead ends.

The same issue exists with reproducibility – it has always been less interesting, and certainly less rewarding, to work on repeating something someone else did.

AI now systematically maps scientific fields, visibly showing which areas – and studies - are thin on reproduction.

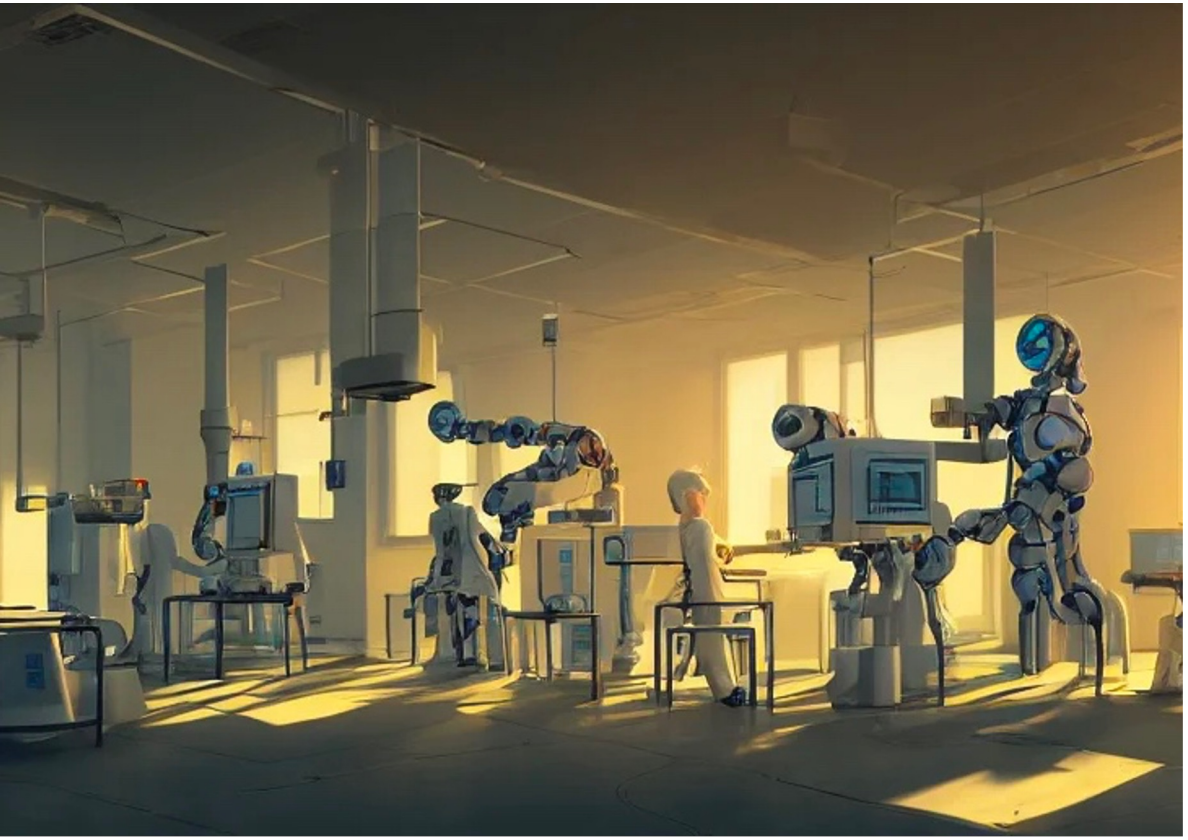
Increasingly, researchers ensure that funding covers their work, but also work from reasonably unaffiliated others. Grant disbursement uses network analysis tools to verify that.

Now, methodologically-sound failures contribute to researchers' success.

Open, DAO-funded science has become a respected part of the scientific ecosystem. Its funding mechanism typically includes resources for triangulation of results, repetition of critical studies, and obviously meta-analyses.

Database-like papers with models and data files on GitHub complement scientific journals. And de-jargonized abstracts are compiled by AI, easing knowledge transfer.

Better use of higher-ed students' time



College and university students, irrespective of where they are, can choose research topics from a globally curated lists of meaningful projects, instead of being limited to their local professors' parochial interests.

For example, the marketplace for open research areas – a sort of Craigslist for academic work – uses knowledge graph and natural language processing to identify areas where research coverage is insufficient, or where reproduction of results is needed. In doing so, it complements the effort of faculty members themselves, who now attempt to harness global cognitive surplus to advance their work.

Work is peer-reviewed by a mix of local faculty members, global academics who have spare time, as well as peer students anywhere.

Critiques are supported by AI-based assistants that among others suggest a better structuring and simplification of language and possible additional sources.

For the students, the clear incentive is to work on contemporary and exciting things, being exposed to other experts, as well as gaining some globally recognized credentials in addition to their local ones. For faculty members, the benefit is additional capacity for new areas, and the reputation score calculated by the marketplace when submitting work or allowing their local students to participate.

Quality adult learning for all

It used to be hard to learn things like heat-pump installations, or advanced bee-pollination techniques, or physical rehab techniques. Or how to calculate one's supply-chain carbon footprint.

Hyper-granular, low-cost learning now happens in specialized "communities of learning", guided by experts with the help of AI-assisted knowledge managers.

Most relevant materials are publicly accessible, from the web's myriad open-source, helpful content.

Learners also take responsibility to curate additional content and give feedback to their peers' understanding of the subject based on specialized rubrics, and through discussion forums. Learning happens through reading, listening, viewing and interacting – in virtual networks.

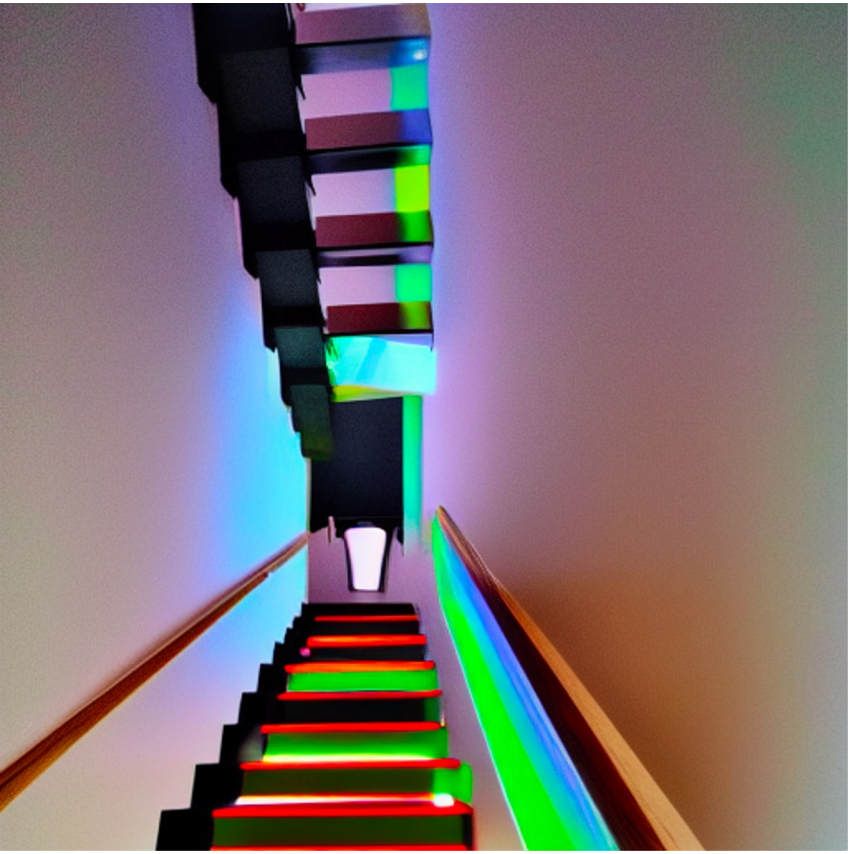
All activities from community's participants contribute to personal scores.

AI assesses contributions' quality and quantity. It also discovers gaps in the curriculum through knowledge-graph technology, and excessively complicated language.

New knowledge is now added much faster in the curriculum. That's useful in reducing the time it takes for innovations to percolate into the fabric of work: from climate transition technologies, to healthcare methods.

Some people still want expensive highly produced education - but many more like the new, "Wikipedia 2030"-like model.

Personalized skills pathways



Many of us need to change jobs these days – among other things, an economic transition is afoot. But it has become easier for workers to gear up and go in the right direction.

The experience is intuitive to most people, not just high-end knowledge workers: you write what you like or let the assistant detect your passions based on your browsing history – taken from the things you look at outside of working hours.

Your skills are then automatically compiled from your professional network platform, or from a curriculum and web scraper.

Their graph, their semantics are extended so that you don't miss anything important just because you don't use all the right words to tell your story.

The most relevant jobs available and found on the web are selected by an AI service.

And to fill the skill gap between those jobs' requirements and where you are, training materials are curated from existing public sources, including communities of learning, and open-source content.

Skill pathways to ideal jobs are finally tailored to individual needs.

Easier career transitions

We need to move tens of millions of people into new jobs, and those transitions need to be fast. That's both within regions, and across regions – for instance, from the Global South to elsewhere in the world.

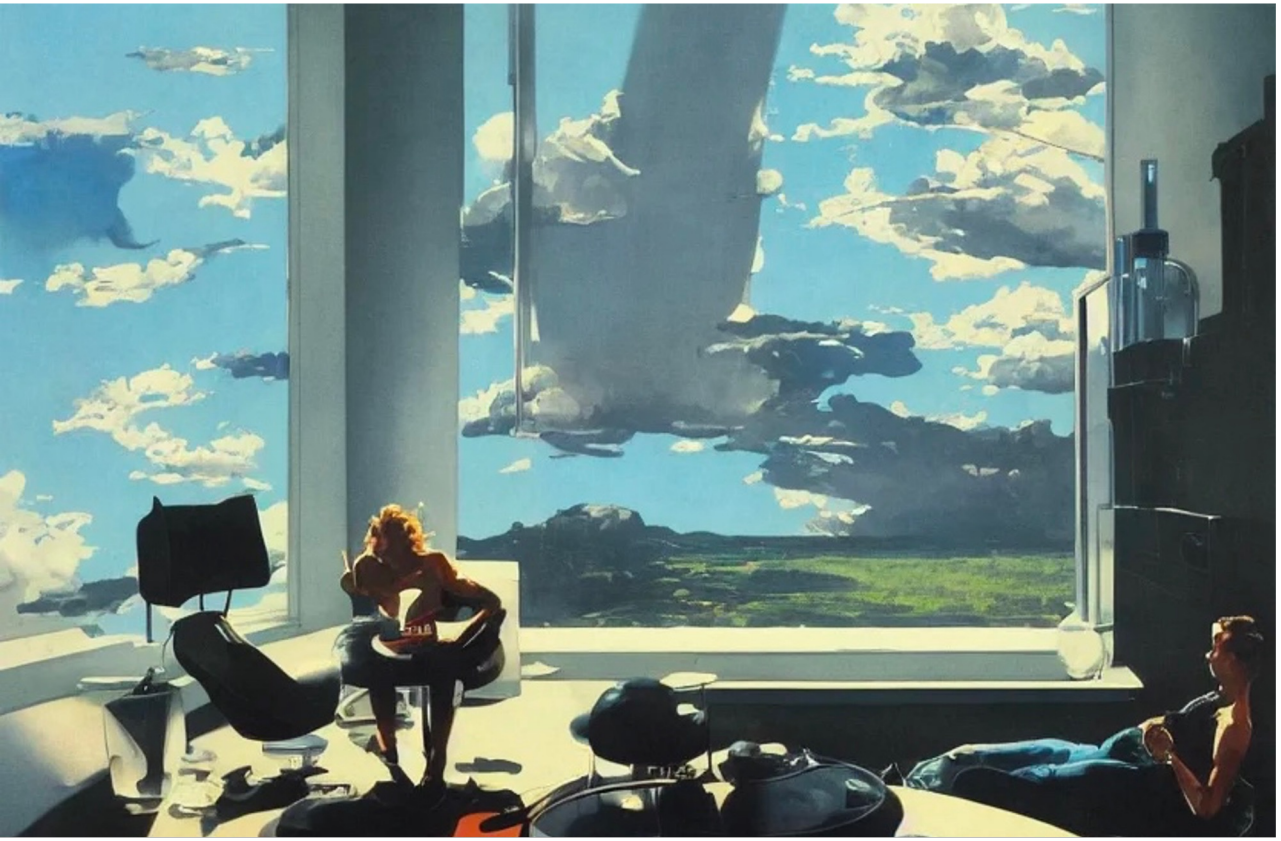
Personalized skill paths and better learning infrastructure help. But so do the use of tools that make those jobs easier to do to newcomers.

For instance, renewable energy builders who come from the oil & gas industry are supported by mixed reality equipment and most importantly, a skilled remote operator is easily accessible to offer guidance in complex situations.

Similarly, teams use swarmsight, the ability of team members to see each other's environment, to help each other in difficult or simply new situations.

Language-neutralization tools, like specialized translations, break the language barrier and facilitate the access to much larger support networks and knowledge bases.

Real work-from-anywhere



Large and intuitive digital canvases, immersive whiteboards, realistic 3D views of colleagues, and helpful knowledge graphs mining the body of accumulated knowledge create the next level of “work from anywhere”.

Leadership increasingly means using those tools to conjure the collective intelligence of colleagues and partners through specialized collaboration methods and technologies.

The powerful collaboration techniques enabled by these methods and technologies lead to an explosion of creativity and innovation, especially when combined with one-to-one bonding time, both online and in person.

Distance-less watercoolers

Ten years ago, when the office became only one of the places where work happens, the sudden loss of network connectivity and attendant serendipitous encounters wrecked havoc on cohesiveness of cultures and cross pollination of ideas – especially for people who didn't compensate those drifts.

AI assistants now constantly look for people we have loose professional connections with, or even those who simply deal with things we are interested in. Those are the edges that nurture cultural and ideas propagation.

Smartstreams and other knowledge graphs help populating that picture.

Those bots also take care of automatically scheduling 15-minute check-ins, helping kindle conversations and counter the loss of "weak ties" that became ubiquitous with the advent of flexible-location work.

The upshot is more innovation and generally new ideas, as well as less isolation for many people who work alone or don't go to an office.

And since we still like meeting in person, for instance at conferences, we now do use some of these new tools there too.

Safer gig work

Freelancing used to be a double-edged sword. The freedom and autonomy were counterbalanced by uncertainty and loss of income.

For some, this was off-putting, and contributed to driving a wedge between haves and have-nots – with nasty social and political ramifications.

Much of that remains, especially in some ultra-liberal countries where a dispassionate look at the data is made impossible by preconceived notions.

However, collective bargaining and safety nets for gig workers and other vulnerable working groups are increasingly regulated and complemented with voluntary schemes, sometime structured as web3 DAOs and funded collectively, as well as with public funds.

Truly global labor pools

Migration is more systematic now.

New services have emerged, helping connecting people with opportunities and helping them relocate.

But bright young people irrespective of location increasingly access good jobs without necessarily needing to move and go through the rigors of obtaining a visa.

This is particularly important in the global south, that is home to a great demographic bulge of young people – some of them at risk due to new environmental changes, and many of them underserved by their local economies.

Immigrants are now systematically trained, remotely, so they not only top-up domain and technical expertise, but also acquire social and work norms, and master collaboration skills with the nuances of their work-host culture.

Communities of learning make this training infrastructure scalable, especially with regards to contextualizing concepts for specific culture pairs (say, Congolese and German).

This trend isn't confined to knowledge work: remote physical work is increasingly possible thanks to faster and more reliable connectivity – e.g., remote operations of farming or building machinery, transportation assistance, and medical or home support and monitoring.

Not your grandparent's retirement

By now it is amply clear that retiring in your mid-60s with full benefits and a life expectancy stretching twenty years in the future, is a burden society can't afford, especially as the population shrinks in many large-economy countries. With the voting power increasingly in the hands of younger generations, retirement – not just pensions – has become an active social design area.
We realized that retirees can be quite productive in many fields. But also, there's now an understanding that their active contribution to society helps them emotionally, physically, and cognitively.

All sorts of community service jobs are available on local, regional, national, and even international marketplaces. Individual skills are matched with the supply by AI, constantly optimizing lifecycle outcomes for both the elderly and the recipients.

We found that older people can be quite important nodes in social networks, and not just in-person ones. We have now deployed support bots to prevent them from being manipulated by scammers, avoid conspiracy-theories' bubbles. As a result, retirees now are a stabilizing force in their social environment. And they are very good at engaging with younger generations – with reciprocal benefits.

In an interesting turn of events, these positive outcomes are not so dissimilar from what indigenous populations, drawing from their elderlies' knowledge, are increasingly able to contribute, and be rewarded for - for instance in exchange for preservation of their ecosystems. Some older members of indigenous communities are now actively sought after by many R&D departments.

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Documents and software co-edited by a supermind

The ability to co-edit documents has been around for over a decade and transformed knowledge work, especially after the pandemic.

Those early attempts had shown the value of getting many eyeballs on work-in-progress documents. But they were limited by habit, and didn't work well across organizations' boundaries. AI showed potential in co-editing text and software, but its quality was sketchy.

"Supermind editing" made a quantum leap. Now AI, using knowledge graphs, proactively looks for people who can provide meaningful feedback. It presents the content to the user to make it easier and faster to provide comments. AI's own input, such as text and code suggestions, is validated by those people at scale – making the AI's recommendations more accurate.

Contributors may belong to your organization and need to have the right to see that specific document, based on access privileges that you define and are reassessed by AI based on the document's content.

But co-editors may also come from other organizations. Professional social media networks have skills data to help include relevant other people in the review and collective editing. Many collaboration tools use APIs from those networks.

These tools make collaboration frictionless, including scheduling calls in calendar slots.

Importantly, they also help with intrinsic rewards, like reputation scores and credentials; and extrinsic ones, like monetary or barter credits that encourage reciprocity.

A new layer of reality

We have never seen the world like this.

Augmented reality adds layers generated by artists, blending cinema, theater, and art onto tourism - or just everyday walks. As you wander around Rome, you may catch a glimpse La Dolce Vita's actors wheezing by on their 1950's scooters; or bump into a platoon of gladiators marching towards the Coliseum (you let them pass).

In some cities' streets, portals connecting with twinned places make you peek to the other side – and vice versa. Soundscapes, chosen by AI based on the environment but also on the preference of similarly-profiled people, match surroundings and mood.

You choose your layer from a marketplace, based on your preferences. Companies and individual enthusiasts compete on equal footing.

Coupled with wearables measuring biofeedback, experiences that support mental health are now being introduced. One of them suggests routes that might relax an anxious mind, and highlights comforting sights as you pass by, instead of just guiding you from A to B in the shortest time. The routes are identified by machine-learning that finds positive patterns from myriad walks.

Even hospitals have started experimenting with layers that quieten or soothe the mind, as recovering patients struggle with lack of exposure to natural light and greenery.

And more could be done: for one, people have started running and biking with the digital twins of others who were in the same location at other times. 5 a.m. runners can have a crowd along with them if they so choose.

For the ultra-pragmatists who are just fine with reality as it is (or already live in nice places), the same tools make multi-mode personal transportation a lot more seamless. Micromobility has just reached maturity, and now passengers receive real-time indications about where to go, including what transportation means to take, schedules, the level of comfort they should expect, and potentially challenging architectural barriers. We have an insider guiding us wherever we go, if we so choose.

That's not all: new reality layers are being used on airplanes to bring back the magic of flight; and in houses, where you can open a virtual windows on beautiful surroundings even if you live in a basement.

A chat with your favorite author

Talking to books' authors and celebrities (including dead ones) is now commonplace thanks to natural-language AI models trained on extensive corpora derived from the content on record.

These models now produce reasonably reliable answers to questions asked by the users. Many of them come with disclaimers waving any responsibility for awkward paraphrases, especially for sensitive topics.

In doubt, they point to relevant highlights of "official" materials extracted from a corpus of text or spoken words from videos or audio.

And every time the algorithm perceives a risk to the integrity of the answers, it makes sure to close the loop with the authors, to tighten the next round of responses.

For many topics however, when sensibly uses, they seem to be just fine, or at least better than the average reader's ability (and willingness) to piece the story together by themselves.

Talk to anyone, anywhere

Ideas traditionally traveled slowly across language barriers. For instance, much business and technology took years to percolate extensively from English sources, where most of them were published, to other languages and particularly those spoken in developing countries or used by smaller populations. Small but meaningful experiments and discoveries made by non-anglophones didn't make their way into a global knowledge commons for years.

Machine translation has now become ubiquitous and effective in unlocking a long tail of ideas from, and knowledge for, non-anglophones.

Much more of the world's knowledge base travels through scientists, businesspeople, and journalists, among others – irrespective of their main language.

Both synchronous and asynchronous natural-language-processing translation, as well as better speech recognition, enable real-time conversations between speakers of different languages.

And for people who meet in person, augmented reality in new mobile devices make it particularly easy to keep the conversation flowing naturally, while ensuring that little is lost in translation by allowing speakers to continuously check that what they said has been understood correctly by the AI – both in content and tone.

Your personal language tutor

Machine translation notwithstanding, many still learn languages – dramatically better.

We know that we shouldn't translate words and sentences too often as we teach people, because that confuses them. Instead, we use the power of the brain in associating concepts – and amplify that.

As it turns out, I am working on my Chinese these days. Many of us haven't given up on China yet. I have submitted to the AI tutor a list of things I have written, so it understands what kind of language I like to use.

The tutor also knows the most important word structures in my stronger languages, and Chinese.

It then uses smart association, and repetition to make me learn. The rest is just machine learning and lots of generative AI.

So it starts by submitting to me sentences coupled with images and animation – simple things at first. It asks me to repeat or paraphrase, and it scores my pronunciation and language quality. It asks me to use my body gestures to further fixate ideas. Sometimes it uses spoken language first. And it gives me alternative words and phrasings for the same meaning, so that the analogous language helps strengthen my semantic field.

It barges in when it detects relevant situations – for instance, things that I am reading or seeing – and uses them as teachable moments.

AI's tutor builds my sentences by looking at relevant news and information from my general Smartstream, and my communications with others, so that the content is relevant and salient, not just some random classroom drill.

I rate my comfort level on parts of the language, so that the tutor knows what should be repeated again. It combines that information with the inference from other learners' signals – based on other languages known, type of vocabulary used, age and other variables that are still poorly understood but which AI finds.

It is like learning language as a child, again.

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Time machines: the past

Engaging with the thinking of the worlds' past is a new trend, both deeply odd and surprisingly fun.

Old archives, including those of the Vatican and many other early manuscripts, have been extensively digitized. They're now used to fine-tune natural-language models that can be talked to as if they were humans from that past.

This happens also thanks to the work of thousands of enthusiasts who can use no-code data engineering and data science models.

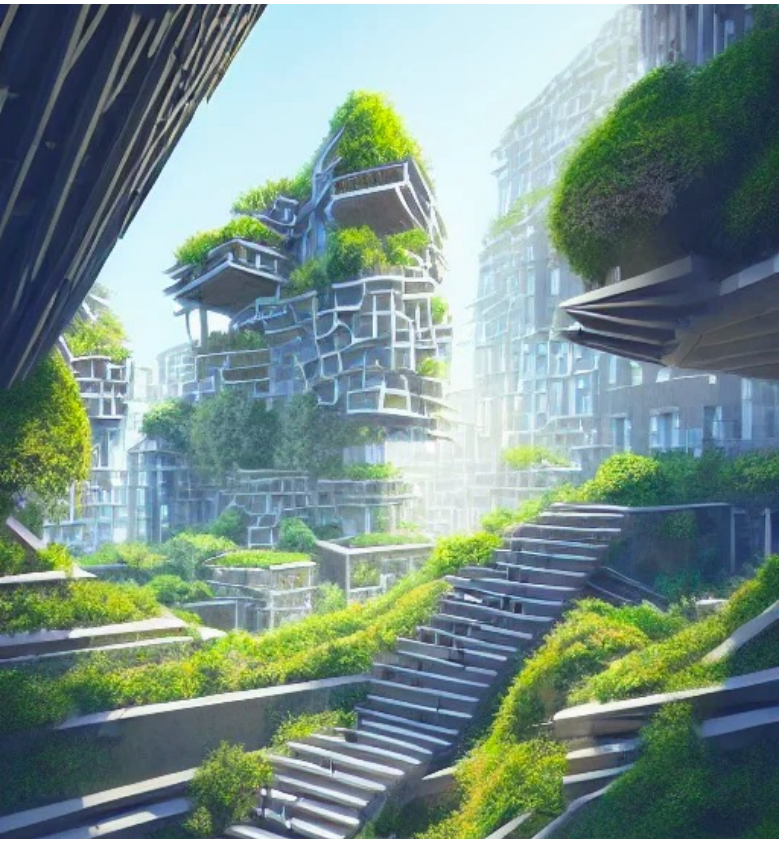
Think about chatting with Leonardo about how to get good ideas, or with medieval peasants that can teach how to draw satisfaction from little stuff.

And obviously, there's more serious insight that can be unearthed – though the AI services come with a big disclaimer about factual accuracy and current academic debates on some of the outputs.

Irrespective of the limitations, it feels good to think that kids can finally experience and feel – not just study - history.

Just possibly, that might close the loop of learning from what people before us did, instead of repeating the same mistakes. Learning from history. It sounds cool.

Time machines: the future



Augmented and mixed reality overlays realistic visualization of old buildings on top of what I see in the street.

Visualization models have been made ubiquitous, and crowdsourcing enables myriad hyper-localized experiences (say, the *bottega* where Leonardo started painting) thanks to passionate creators who do this for fun, reputation, and a bit of web3 rewards.

It all started with things like Google Earth. By now 3D modeling and natural language allow you to see, and even chat with, the past around you.

And the race is on to build the same for the future, with all kinds of futurists joining the fray, and a supermind weaving together narratives from all corners of the earth.

This has become a new art, at the intersection with social sciences and technology innovation. It truly requires people to build on machines' output.

I'm flipping through that quaint little document I wrote eight years ago, those augmented collective intelligence futures woven by hand, like an artisan. Today similar documents are routinely compiled by analyst teams supported by AI scouring network-based knowledge.

The resulting hyper-granularity is astounding, and helps envisioning our future practically, every day.

All of this is a good thing.

Time to disconnect. That's also good.

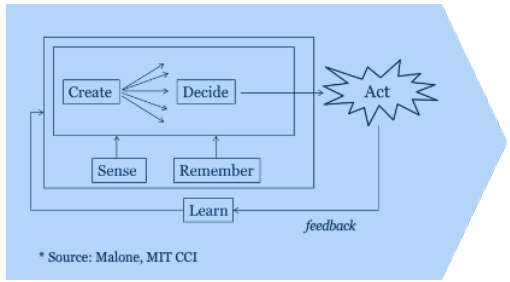
How to design positive futures

with Augmented Collective Intelligence (ACI)

Supermindstorming

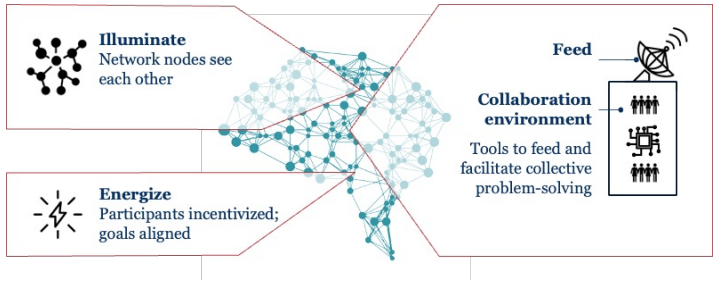
SIMPLIFIED

Generating supermind-design ideas



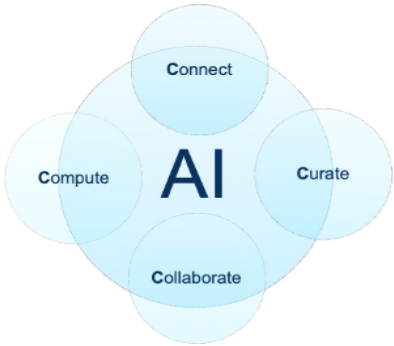
Cognitive process

What is the "job to be done" collectively? What "cognitive" elements does it require?



CI module

Which components can help a *network* – e.g., a community – perform those cognitive processes?



Augmentation

Which AI's "4Cs" and other digital technologies can enable those modules?

Explore / Diverge*

Synthesize/ Converge

More detail in the Practitioner Workbook at supermind.design

supermind.design

Supermind Design and Design Thinking

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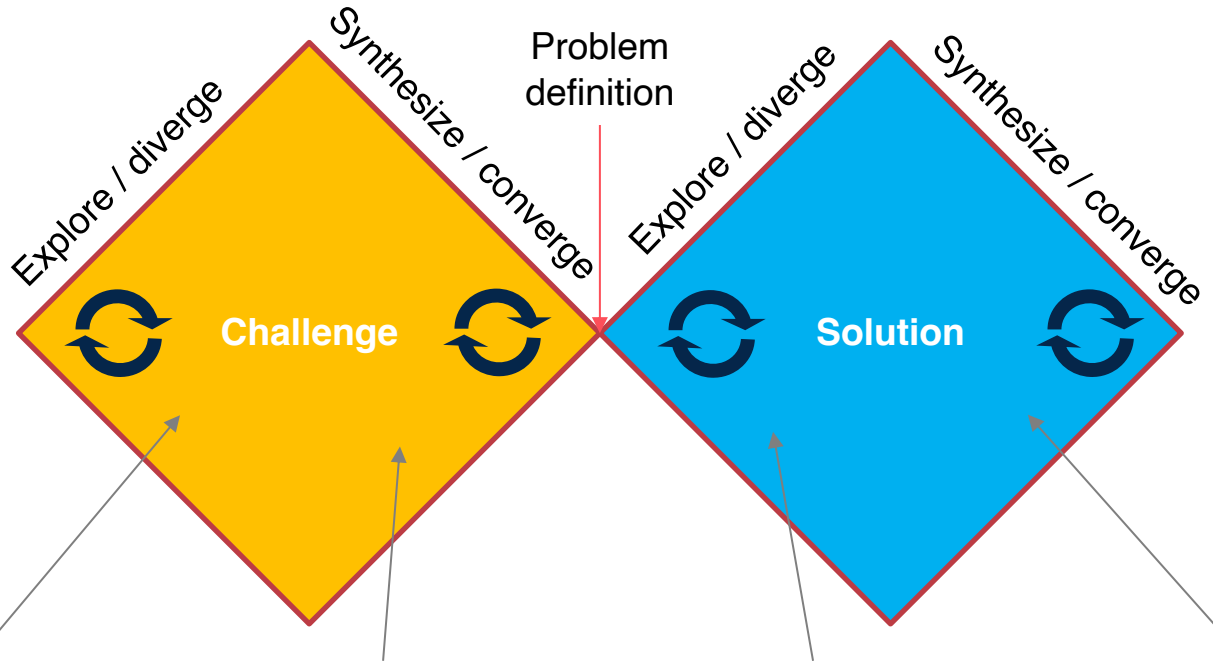
Enabling *systems*-thinking



Typical questions:

- Can we describe the current state as a suboptimal collective-intelligent system? (e.g., hierarchical, unable to create at scale)
- Can we describe the challenge through analogies with collective intelligences? (e.g., how could a community do [X]?)
- Can we take inspiration from solutions in analogous spaces where collective intelligences work? (e.g., how would Wikipedia do [X]?)
- Can we design a solution that leverages a collective-intelligence system? (e.g., community of learners, with collaboration tools, teach each other)

supermind.design

Explore further

Discover how to use ACI to design and build the next generation of what you do, at supermind.design.

You will find free resources, from workbooks and videos to a database and continuously curated news.

Share this document liberally, and be in touch.

Let’s go build superminds.