

AURELIS/Lisa

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*To bring the total human being into healthcare
in the most ethical way possible.*

Lisa/AURELIS in 12 bullet points

- Modern Western medicine has been based on the assumptions of mind-body duality and the absence of non-conscious mental processing.
- Cognitive science and neuroscience have proven that these assumptions are wrong.
- Still, Western medicine – in the vast domain of psycho-somatics – has not developed in accordance due to different silos and the broad cultural embedding.
- Unfortunately, the assumptions carry immense consequences on health, well-being, and even mortality. Additionally, they carry immense costs for society. The results of research do not always translate to real life. Hence, there is an urgent demand by healthcare-payers for 'Real-World Evidence.'
- In psychotherapy – counterintuitively, yet undeniably – the specific methodologies have been proven in several meta-analyses not (at all) to contribute to the effectiveness.
- AURELIS opens the non-specific factors of psychotherapy. Behind AURELIS lies a solid ethical base of respect, openness, freedom, depth, trust. Taking the total person into account (mind-body unity, non-conscious mental processing), we speak of Compassion. This accords with Eastern and Western insights.
- AURELIS science-based solutions have been developed on 200+ domains and deployed through the Internet. Deployment in many languages can be accomplished with relatively small efforts.
- Within AURELIS, rationality and science are crucial. The endeavor is to be fully integrated within medical science and practice, and to push the science forward.
- Lisa is a project in development: a Compassion-based, A.I.-driven, self-learning coaching chatbot that will guide users within AURELIS and perform user-central coaching with many users simultaneously.
- Through continuous pattern recognition, Lisa will be able to engender many scientific developments.
- We seek cooperation with many partners, incl. commercially, academically, philanthropically.
- Building on a vast experience base and exclusive insights, Lisa will be well placed to play important roles also outside of the health and wellness domain. Eventually, Lisa will also be relevant in the evolution toward Compassionate A.I.

The aim, organizationally

This is to be 'of and for people.' The final goal is a corporate-like structure with huge corporate responsibility, global reach, and deeply affiliated to science.

A historical note

Present-day medicine is some 200 years old. It has been founded on Western Enlightenment, which mainly intended to wrestle the rational individual free from magical thinking. This urge for rationality brought in its wake a flood of scientific discoveries, transforming the West and, ultimately, the world.

Before +/- 1800 (broadly), the officially accepted medicine – as taught at universities – was Galen-inspired, based on a theory of four humors, clysmata, blood-letting, etc., which didn't survive modern scientific scrutiny.

Put yourself in 1800 — high time for Napoleon. Trying to bring present-day medicine insights without any present-day tools, you would have a difficult time. With all available means from now, you would be the utmost hero.

Some facts and numbers

In developed Western countries, around 10% of the population takes antidepressants. In a recent (published 2018) huge meta-analysis, the effect is hardly better than a placebo. What does this say about antidepressants? What about placebos? What about the desperate situation for millions of people?

Projected healthcare costs in USA, 2027: \$ 5.950 trillion (only consumption). Illness costs a lot more to society in absenteeism, presenteeism...

AURELIS (AUtosuggestion and RELaxation towards Inner Strength) aims at helping you use your mind as well as possible, including the non-conscious part – of which you normally are not consciously aware.

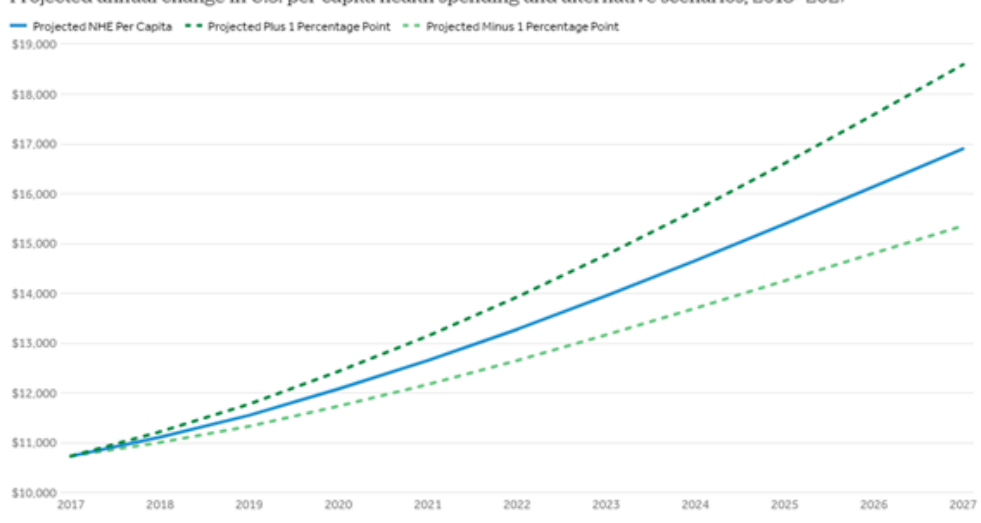
A main part of the project is **AurelisOnline**, a set of more than **1200 prerecorded audio sessions on more than 200 domains** in which autosuggestion is used to let you communicate with your non-conscious in a most respectful and ethical way.

Another part of AURELIS is formed by (9) Read&Do experiences: online workshops.

Psychologists act as AURELIS coaches for clients who seek further advice.

Published within AURELIS philosophy are: **14 books, 800 blog-essays, 5000+ aphorisms, many articles and side information.**

Projected annual change in U.S. per capita health spending and alternative scenarios, 2018- 2027



Source: KFF analysis of National Health Expenditure Accounts (NHEA) • Get the data • PNG

Peterson/Kaiser
Health System Tracker

From: <https://www.healthsystemtracker.org>

Some specific domains/examples:

- Chronic pain affects at least 10 percent of the world's population with estimates closer to 20-25 percent in some countries and regions.
- Each year, 50.000 people in the US die from an overdose of medically prescribed morphine.
- From 1997 to 2011, the number of US adults addicted to prescription drugs increased by 900 percent.
- One-third of personal bankruptcies in the US are mainly due to medical bills.
- 'Medically Unexplained Symptoms' (MUS): account for up to 45% of all general practice consultations, while a study based in secondary care indicated that about 50% of patients had no precise diagnosis at three months. [see: [Medically Unexplained Syndromes](#)]
- The twelve-month prevalence of mental illness among adults 18+ in the US is +/- 20%. Comparable numbers in Europe and China.
- Etc.

On top of MUS, many symptoms/syndromes are only partially explained. Smoking provokes cancer, but why do many people keep smoking? Chronic inflammation heightens the chance of autoimmune disorders, but what are eventually the main factors that produce chronic inflammation? This way, medicine is full of substantial explanatory gaps. How will they be filled in the future?

Back to the present

Remember the difficulties you had in 1800, trying to bring the insights without the tools... then bringing them *with* tools... Huge difference.

Lisa/AURELIS is a tool to 'open up' users to a new way of thinking that will again transform a huge part, if not most of medicine, this time mainly related to the psyche. In this sense, Lisa may be the gateway towards medicine of the future.

Lisa is A.I. software to be integrated as 'AURELIS-Assistant', hence the name AURELISA, nickname 'Lisa.' Lisa guides users towards the right choice of AurelisOnLine sessions and supporting information elements (Read&Dos, blogs...) Additionally, Lisa is an **in-depth coach**, guiding users to self-reflection, providing room for thinking and a feeling of empathy.

We don't have to wait for another 200 years.

NOTE that Lisa/AURELIS can and should be perfectly integrated in medicine. Science is 100% the way to go. Moreover, medical science is still evolving. Opening the role of the psyche in sickness and in health will be game-changing. We intend to play a substantial role in this scientific development.

Forget Freud... mostly

Freud saw the subconscious being populated by conceptual entities (complexes etc.). This led to few practical implications. The reaction led to the further negation of non-conscious processing and suggestion therapy (which was flourishing back then).

Around 1980 (broadly) came neurocognitive science. We now know, through a torrent of science, that non-conscious processing in humans is huge. More to come.

From the start on, AURELIS has been conceived towards dealing with mental patterns, especially in-depth. Pragmatically central to the whole project are empathy and autosuggestion. These coincide with the 'nonspecific factors in psychotherapy,' arguably the only ones that work.

A patient with chronic low back pain consults his physician... again. This has been going on for many excruciating years. Painkillers (hopefully no morphine), a trial with antidepressants... maybe surgery will help? The physician hesitates. She has seen too many 'failed back' operations: patients being worse after surgery than before. But recently they have both heard about AURELIS and agreed to give it a go. This time, the patient returns to his physician with a positive story. With strict patient consent, the physician also already received messages from Lisa right within the medical file, so she knows what is happening. After a while, the medication can gradually be lowered. Less side-effects, less costs, no surgery needed!

Another revolution: within science itself

The new medicine of the 1800s (think 'physician') has been inspired very much by physics as the hard science of that era. Einstein, Bohr, Heisenberg etc. were yet to come. Let's look at the scientific method, which was also new in its rigorousness. It was the method of experimentation, which brings two conditions:

- Closed world assumption: clear borders of the experiment and clear elements in order to remove as much noise as possible.
- A limited number of experiments -> extrapolating the results.

Note that it was within the 'noise' in Newtonian physics (such as: twice speed of light is still speed of light...) that Einstein started a revolution in physics. At present, in medicine, we have a lot of 'noise': placebo, reproducibility crisis, huge prevalence and low treatment efficacy for MUS, huge overlap of 'mental' and 'physical' disorders, etc.

Big Data will change this. Experimental science will not vanish. On top of it, another take on scientific proof will arise. This process has already started. The driving force is:

Big Data + Artificial Intelligence = Big Knowledge.

Through this, the constraints on scientific experimentation can be hugely relaxed:

- Working with an open world.
- Much less limitation on data gathering -> less extrapolation needed.

[Note: This transition may remind one of going from a 'toy world' in AI – dealing only with object-like elements in an objectified environment – to the real world to which the previous, more straightforward solutions didn't scale, engendering huge disappointment. Through big data crunching, we see an achievement of real solutions to real problems now, hence the present-day surge in AI.]

Eventually, this is no longer hypothesis-based experimental science. It vastly augments. Experiments make way for life-like sampling. This is 'new' in a very constructive way, if done with common sense.

Crisp concepts are discrete patterns of necessary and sufficient characteristics. Those are not the only relevant ones. Less crisp, distributed patterns may be more critical in many ways, including health and well-being. However, viewed from an exclusive focus on pure concepts, they may seem like noise. The aim should be to make what is less clear as clear as possible. AURELIS has this aim. Big Knowledge has this potential. It transcends the limitation within science on conceptual crispiness. In fact, with Lisa fully operational within AURELIS, there is in a sense no limitation on relevant data gathering except through external conditions: privacy issues, computer power. Through this, much noise that exists today in medicine and healthcare generally can turn into distinct shapes. A mist will clear up. What will be seen?

It will be astonishing.

Moreover, with Lisa/AURELIS in place, we also have the means to therapeutically deal with all this new information in constructive ways. Millions of people will reap advantages.

Projected diminishment of healthcare costs in 2030, if Lisa/AURELIS accomplishes a 1% gain of mentally related cost worldwide: \$ 60 billion/yr. (source: World Economic Forum, in Willis Towers Watson survey, 2019)

So, Lisa

Lisa/AURELIS is well placed to make this happen in psycho-somatics.

AURELIS = dealing with mental patterns ‘from head to toe.’ Patterns everywhere. The coincidence is not by happenstance. Connectionism (ANNs, parallel distributed processing...) was/is a source of inspiration.

As a continuous pattern recognizer, Lisa will ‘by nature’ recognize less discernible patterns of importance in the human psyche and how these lead to illness and cure. Lisa will do this by continuously and actively searching within the coaching itself. People will be motivated, will benefit, will see the results, and be motivated even more.

Then – if we do our job well – Lisa can go broader.

Lisa within AURELIS, AURELIS within Lisa

AURELIS is thus a favorable environment in which to develop A.I., such as through combination with empathy. Empathic A.I. is deemed by many to be ‘the next A.I. breakthrough,’ dependent on the accumulation of human-related background knowledge. Over time, Lisa will ‘talk’ with many people and be exceptionally well placed to accumulate such knowledge, relevant insights...

Through this, Lisa also learns to better communicate with people: discerning their true motivations, even guiding them – user central! – towards self-reflection and self-knowledge. In the process, Lisa will be more and more Lisa. Humans will be more human.

Thus, ethically, a further A.I. progression would be opportune within a setting where human empathy prevails all the way through. In our view, this would also resolve the potential mismatch between human and A.I. goals (so-called *value alignment problem*).

In the future that we envision, Lisa will be prominently present in many domains.