

The future of psychedelics

by Luc Sala

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There is much happening in psychedelics, both at the research side (into effects, new substances, anthropology) and in society. But can we sketch a future for these at the same time scary and yet promising substances? I develop here some speculative thoughts, but also pose some serious questions about the relevance of psychedelic experiences. Questions for researchers, for policy makers, the Law and the medical world. But also for artists, decision makers, innovators and for all of us. Can we deal better with the major issues facing society if we better understand ourselves, our minds, and use these fascinating means to explore new ways to create, make art or make decisions?

How will we deal with these, as yet mostly illegal substances, in the future? Will the authorities broaden the range of prescription drugs with 'happiness' enhancers, allow smart drugs and performance enhancers? What new compounds will emerge, what applications and combinations with different activities and therapies will be found effective? Will the legal use go beyond medical and therapy and officially reach fields like creativity enhancement and arts? Will they remain illegal or will science and the government bow to reality and what the voters want? Will the indigenous people take control of what can be seen as their cultural heritage? Can we use psychedelics (ethically also with respect to privacy) as tools for diagnostics of anomalies, testing intelligence, creativity, conformity, as a lie detector in court or for interrogation? Will smart wearables lead to new



insights about how these substances work? Will the new sensor technology, in combination with substance tracing, be used to probe into private use, but also in HR selection, in marketing, registering what our subconscious reveals? Will electronic drugs (using sound, light, virtual reality (VR), maybe in combination with substances) develop into psychedelic alternatives, something already predicted and explored in the early 90s? Will we acknowledge how psychedelics in the context of ritual (and eventification and festivalization like with ayahuasca are clear trends) can not only be entertaining, offer an escape from normality and healing, but can be used as tools for transformation, stimulate innovation and group mind changes?

Transformative technologies are what now drives not only psychologists, the medical world (the best prevention and treatment of diseases or addiction is often lifestyle change), the computer game and VR industry, but also the marketeers and politicians. Innovation is what everybody preaches, to deal with challenges like wealth inequality, global warming or terrorism, we need new answers.

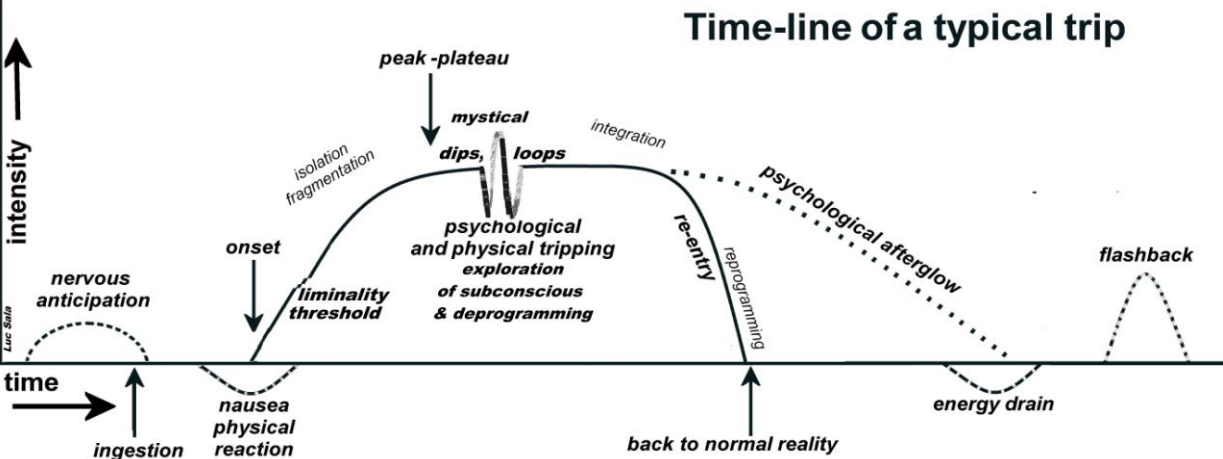
Technology moves on, science brings new possibilities, both legally and hidden. Alternative ways to produce existing drugs from different precursors are explored. There are new compounds

synthesized nearly daily, like new cannabinoids and cathinones and other NPS (New Psycho-active Substances). Not only the 'alternative' world looks out for new and better substances, the 'legal' drugs companies also search for what could be patented and used in 'allopathic' normal medicine and psycho-pharmaca. What will happen if genetic engineering makes it possible to create one's own drugs in a way similar to brewing one's own beer? This has been demonstrated for home-brew opiates, according to an article in Nature magazine, and seen the widespread home-growing of cannabis many will try this if it becomes feasible to do so.

Privacy and drug testing (at work, school, random, at festivals, in hospitals) are at odds, but the tracing becomes easier and cheaper. There are of course safety issues, but what if use becomes more tolerated and decriminalized? In a 'high' state we give away a lot about our psyche, preferences, mind state. What if the government, the music industry and the marketers start to use big data collection at festivals or places where people are high? What if they start using that to influence the crowd? Festivals and drugs are already like twins, and the personal and group (political) transformation effects are well established. Demagoguery and manipulating the crowd is much easier when they are high, and the tools for 'mind shaping' with sound and imagery are more and more refined.

Most of these substances are still illegal. There are essential questions to be asked here. Who actually benefits from criminalizing both users and providers, leaving the business to organized crime? What will happen if cultivation of (precursor) plants will be made legal? Will the medical and pharmaceutical industry move in and assume a major role in prescribing (and selling) at huge profits or will the tobacco companies seize this opportunity? The days that LSD research was just looking into its use as a weapon or way to control people are hopefully behind us, the danger now is Big Pharma moving in. Will the government take an active and monopolizing role, like distributing the soma, as in Aldous Huxley's novel 'Island'? This points at the danger that they will also use it to make us 'cattle' and repress innovation and social change and force all to conform and behave like cattle? .

The war on drugs, incarcerating millions, turning them into modern slaves to support the (commercial) penitentiary systems, is likely to subside; the political tide is turning but this means the medical system, the Law, the insurance companies, the schools and the tax authorities will have to adapt. The negative effects may be far less, but still there are dangers, like irresponsible use, safety in traffic, etc. Just like there is an industry around alcoholism, there will evolve an industry concerning



the production and use of these substances, which will need regulation, policies, calibration and education.

The future will tell, but we can think ahead, see the broad horizon and yet not close our eyes to the dangers. Maybe we will learn to appreciate the beneficial effects, reduce harm, allow citizens to choose for themselves and deal sensibly with the negatives the way we do with alcohol and tobacco?

It is hard to predict, but the trend in the West is towards a more lenient regime and laissez-faire approach. In the United Kingdom every weekend millions of people go clubbing with some chemical assistance, the percentage of people smoking a regular or occasional joint in the Western World runs into double digits, and how can we ignore that there are whole nations more or less habitually using kratom, khat or coca-leaves? Governments are slowly allowing more freedom, more medical research and medical use. Not everywhere though; in some countries there is either a more religious stance, Islam is dead against drugs, or one is only looking at how to make some money out of the thing, for the government or those in power, the narco industry.

Decriminalizing some drugs, notably soft drugs like cannabis and ecstasy, is a possibility supported by many, at all levels. It will lift the onerous burden of criminal justice and the cost of police, prosecution and prisons. Legalization is a further step. It will normalize the trade, allow controlled and reliable production and may bring taxable income. More pure substances will also help eliminate some of the unwanted side-effects. Separating the substances in new 'classes', different from the present fairly strict 'criminal' classification, makes sense. Soft drugs like cannabis are in the same range as alcohol and tobacco, the escape and addictive drugs like heroin are a class apart, speed and performance enhancers could be treated separately, the empathogens and stimulants like XTC and 2CB have their turf and the heavier psychedelics should be treated separately.

Decriminalization of the use and production of at least soft drugs will be a major step and it's in the air. The law gets a bit easier, not only in allowing the sales and use of substances like cannabis, but there is more acceptance and appreciation in many fields. The most important development is that more scientific research is now (again) allowed into the effects of these substances, in a scientific and medical context.

The problem is that this research mostly copies older work, does help proving that 'responsible use' in specific diagnose-treatment combinations is safe and effective, but is very limited to the traditional problems of anxiety, addiction, depression and such. Aiming at for instance legal use of XTC in therapy is 'legalization' but doesn't much for the serious problems caused by the criminalization and the war on drugs, which is really a war of drugs (the legal versus the illegal, with both sides driven by money). Such limited legalization is worthwhile and opening doors to other applications, but a far cry away from what millions and millions each weekend experience on festivals and in self-exploration setting. The (illegal) underground and the legal medical world are two different worlds, and both have hidden agendas, motives and visions. The real issues of psychedelic substances, like the access to the otherworld, the possibility of ESP (and in general magic) en creativity enhancement, the potential for group mind interaction, there is much more than a cure for PTSD at stake. And what do we understand of group mind anyway?

It is clear that over time we will learn more about how all this works, how it affects the brain and the body and our cognitive and creative capabilities, and no doubt there will be hosts of new synthesized chemicals, but also new psychoactive plants or animal secretions may be discovered, for new uses too, like in childbirth, for euthanasia, enhancing our senses.

The negative

But beware, there are counter arguments too. It may affect cognitive development in kids, have an effect on workforce productivity, may lead to more accidents and medical situations, and opens the way for users to move on to the heavier stuff. To allow free use of crack or heroin is obviously out of the question, due to the health hazards, addiction symptoms and the negative effects on behavior, even as these also might be mitigated in a less criminalized situation.

Another factor that may have both positive and negative effects is that the range of psycho-active tools, means and substances is expanding, Many legal prescription drugs contain psychoactive substances, and their use as a mental enhancer or mind-expanding and performance enhancing drug has developed out of normal and accepted use. Ketamine is a good example, Hydergine and Piracetam (dementia treatment) and Ritalin (for ADHD treatment) are also used (in a different dosage) for consciousness or cognitive expansion and mood-altering.

The 'Nootropics' category grows; the smart drugs, memory enhancers, neuro-enhancers, cognitive enhancers, and intelligence enhancers, but also stimulants, learning enhancers and suggestibilia. There are various effects on the senses and consciousness, they act as empathogens, entactogens, entheogens, erotic stimulants, aphrodisiacs and creative stimulantia. Maybe at the expense of normal development, but who cares, Steve Jobs praised LSD as mind-enhancer and the use of dope in sports makes headlines. How long will it take before universities and commercial research institutes will adopt such practices?

It is not new, people have used coffee and stimulants all along. There are now lots of herbs and 'natural' concoctions on the market which are slightly psychoactive and sometimes, when taken in combination with other substances, have psychedelic or nootropic effects or at least act as stimulants (and are not always legal). Here we can refer to Salvia divinorum (Officinalis), Guarana, Kratom, Syrian Rue, Damiana, Khat, Kava, Kola Nut, Calamus, Catmint, Laudanum, Gingko biloba, Ginseng, Bacopa monnieri, Crimson Weed, Morning Glory, Waterpepper and many, many other plants, herbs, but also substances like isoflavones or oxytocin are in the 'smart shops' or on the internet. They are often combined in new mixtures and given fancy names like Herbal XTC. Here innovation, also due to regulation of precursor materials for more common substances, kicks in. New varieties and combinations like pharmahuasca are regularly found and improved; there is cultivation and breeding to produce 'stronger' marijuana strands (more THC or specific cannabinoids) and magic mushrooms with more impact.

The popularity of such 'new' substances carries risks, they are often kept proprietary and made very expensive, while medical risks are not properly assessed. As soon as a lot of money can be made with anything, a kind of mafia-situation easily develops. The regular (legal) drugs-companies also operate from the same principle and in the health-food industry new remedies carry a high price. New and maybe even approved use like in palliative care could lead to a high demand and new markets may

emerge if any positive effect in for instance cancer-treatment could be proven or just assumed, like what is happening with hash-oil, or hemp CBD.

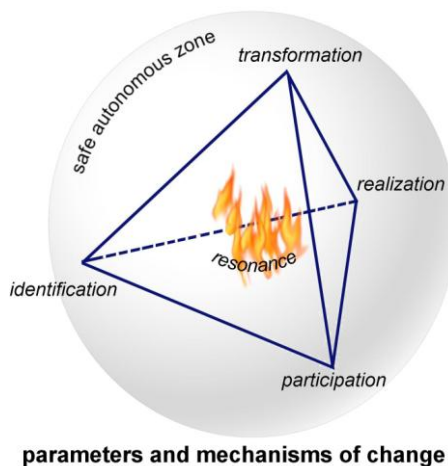
Another possibility is that a whole series of products get developed, using the psycho-active effects. Remember Coca-Cola, originally containing coca-extract and now the stimulant taurine is used in so-called energy drinks. After all, the marketing machinery will move in once there are enough customers; by customizing products, branding, and packaging.

Politically incorrect, the dangerous questions

Not only the law, but the religious, political and scientific establishment doesn't really want research that undermines the reductionist and scientific paradigm or debunks the current notions of fairness and social justice. Suppose using psychedelics (depending on dosage and setting of course) makes you live longer, makes you more intelligent, reduces the risk of cancer, improves your sex life, increases social mobility, makes you more creative, makes you vote more left of right, etc. and this could be proven, what then? At present most research and investigations stick to 'safe' issues, like will it help for addiction, depression, PTSD and in palliative care, in individual cases. Experiments with sex and how psychedelics can help improve our sex-life are of course carried out by many, the great substance-innovator and chemist Sasha Shulgin reported rather free about this, but is not really the subject of academic research (yet). There are some popular books, many from the heydays of the sexual and psychedelic revolution between 1967 and 1972, and some recent ones like "Sex, Drugs, Einstein, & Elves: Sushi, Psychedelics, Parallel Universes, and the Quest for Transcendence" by Clifford A. Pickover and "Psychedelic Sex" from Taschen books, but little academic stuff, while the internet is full of personal accounts and most user have experimented with sex. In a recent presentation on a big psilocybin research project at the John Hopkins hospital, the subject of sex was kind of 'forgotten' and prof. R. Griffith called it 'inconsequential', clearly expressing the limitations and true goals of such research, aimed at just creating (profitable) diagnose-treatment combinations for legalized treatment of PTSD and such.

Academia steers clear of the real impact of psychedelics on society. Few sociologists will endanger their career by looking into how many pot-smokers supported Bernie Sanders. Big data techniques offer ways to at least research this, but who will fund this or publish the results? Or take the notion, that taking these drugs per se have little effect on intelligence, creativity, sociability or happiness, but

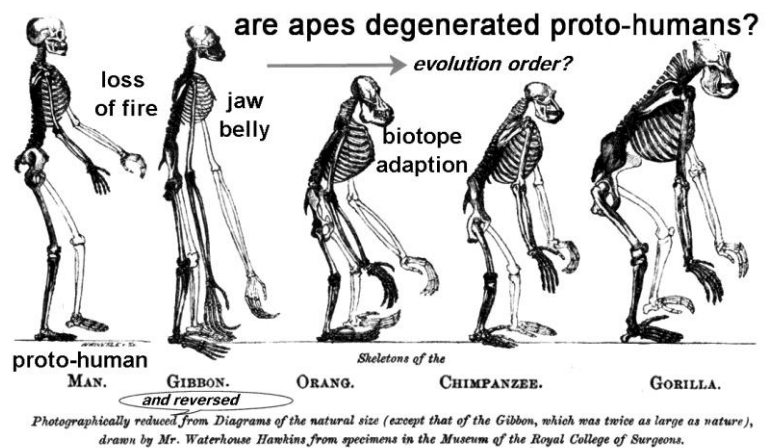
that these are boosted when combined with group processes like festivals and being exposed to the talents of others? It seems not too farfetched, we do send our kids to elite schools, don't we? Proving that, however, would mean the whole educational system needs reframing, that research, art and maybe the whole notion of human development has to change. If (Western style rational) intelligence is really no more than a defense system against stress and social pressure, and doesn't bring more happiness, why not use things like cannabis to fight ADHD and stress? Why are indigenous societies less intelligent (according again to our Western standards) but often more happy and socially



integrated? Why do we use heavy anaesthetizing in childbirth, ever more Caesarean (52% in Switzerland, 59% in China's big cities) while we know or suspect this leads to all kind of problems later, like obesity, ADHD, more need for In Vitro Fertilization (IVF) and less happy people. Why not use 'natural' herbs to help childbirth?

A step further, researching or even proving that psychedelics and magic or extra-sensorial perception (ESP) have more than an illusionary relation will upset many, including religions and the Law, and will attack the foundations of philosophy and all science. A large part of the world population believes in magic and many cultures used substances to that effect, but not the science community (as yet). There lurks a real psychedelic revolution and maybe this is what the likes of Leary and McKenna envisioned, but the link between psychedelics and magic frightens all that are part of the status quo machinery.

When we would be willing to look beyond the obvious, and for instance look at the function of what Mircea Eliade, Gregory Bateson and others called 'sacred space' and P.L.Wilson "temporary autonomous space". We will see what a safe environment means for personal development and efficacy of therapy, and new protocols will emerge. When we can step away from the 'accepted' evolution theory and look at what epigenetics has to offer or what a radical approach that suggests that the large apes are specialized and degenerated humans (proto-humans) and thus great subjects for psychedelic research into regeneration of capabilities, we might be in for some surprises. The embryo development, the way apes move, their learning capabilities of human skills (from humans, not from peers) and even the DNA point at this, and we never found a missing link to support Darwin, Lamarck's adaptive evolution seems to be more logical than just survival of the fittest.



Innovation and insights, tools and platform

I already mentioned the growing popularity of smart drugs, but there is a more direct perceptual effect of using psychedelics, it can bring insights of universal relevance, epiphany like revelations. In an enhanced state of consciousness, as can be reached by way of psychedelic journeying, people often feel their creative capabilities expanded, their 'knowing' and intuition reaching new heights, they experience access to greater wisdom and truth than in their normal state. This is often ridiculed and those ideas discarded afterwards, as they make no sense in the then again limited perspective or in the eyes of bystanders. But maybe there is truth there, sometimes?

In a trip many feel they reach or receive insights not only about their own situation, but relevant on a wider scale. There are stories about big scientific discoveries, but also many artists and even entrepreneurs will acknowledge that psychedelics have helped them in their work.

Systematic use of trance and psychedelic techniques to gain new insights and fuel innovation, however, has not been part of the scientific or in general the innovation toolkit, but this may change.

New ideas often result from a change in perspective, looking fresh at problems, turning them in opportunities. Tripping offers new perspectives. Pressing issues like ecology, energy, terrorism or peace are not (yet) addressed in this way or at least not published. Why not use what psychedelics could offer in a format geared towards exploring these different perspectives, including the irrational? There are many fields that could benefit from this, dealing with diseases of the psyche to start with, but why not use the psychedelic format in a more or less standardized (ritual) way to look a bit beyond that?

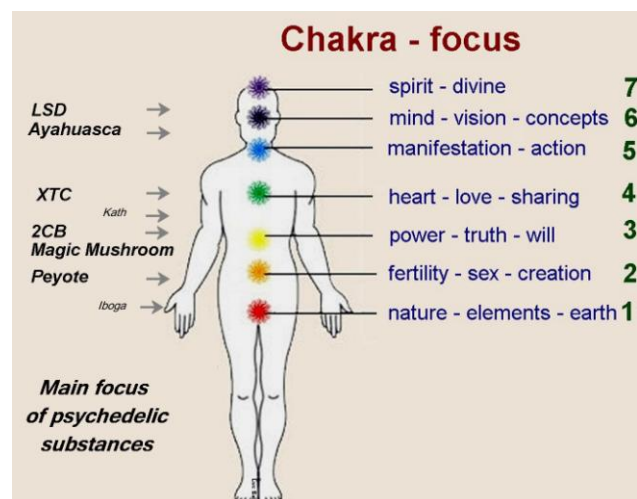
A good example of a field where psychedelics are a great tool is the fundamental dichotomy between religion and science, seen by many as the root cause of many social and ecological problems. Questions like the nature of time, non-locality, entropy and syntropy (Luigi Fantappie's idea that information flows from the future), the notion that there are a deterministic and a separate free will time dimension, supercausality, superconsciousness; what better tool to research this than something that projects the seeker into a state where time, space and the laws of physics are malleable? The complexity of such enigmas requires new methods of exploration, why not use what nature offers?

Using psychedelics as a tool, rather than as a stand-alone individual experience, can be combined with existing methods. Think about brain-storming or other group processes, but with something extra. This maybe requires some experience in tripping and specific choices in dosage, drug, set and setting. This kind of use of course resembles the shamanic approach, where the shaman trips on behalf of someone or the tribe.

Combinations with therapy, electronic drugs

We will no doubt learn to better dose and arrange for set and setting. A deeper understanding of the neurological mechanisms in the brain and the body, using modern scanning and neuro-research, will probably lead to new ways to administer the substances, new procedures and safer conditions. As we learn more about the short- and long-term effects a more specific use of the various substances can be made, either psychological, emotional or physical. Also combinations of substances and the use of identical or different 'boosters' or otherwise enhancers to prolong or enhance the effects will probably be researched and become more widespread. Many already privately experiment with this, but it has yet to be studied in formal research projects.

In the context of therapeutic use more adequate diagnostics of the underlying problems, at the 'ego' surface and at deeper and subconscious levels will help to identify the most effective approach, substance, dosage and timing. I use



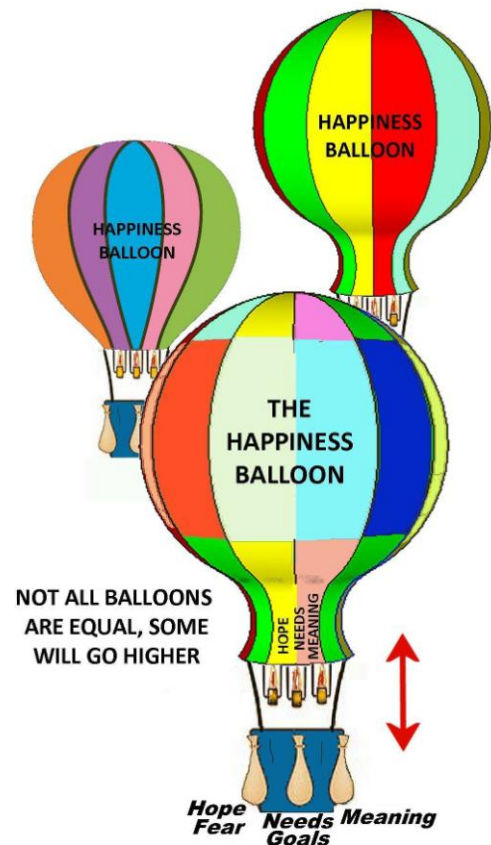
the chakra-specificity of certain substances as a tool to identify the most effective substance..

The combination of postures, exercises and meditation, and why not enhanced this with augmented or virtual reality, with certain substances will probably be researched more. Sitting, lying, walking, or certain body postures have different effects, add to that the environmental factors like sound, light, temperature, etc. and a whole realm of potential studies emerges. Modern sensors and feedback can be used to optimize and customize the experience. Many people know that a warm bath, massage, specific music, certain dance rhythms, drumming or even sensory deprivation (darkness) enhance the journey or steer it towards certain realms. Immersion, engaging mind, body and emotions is what seems to work best in self-discovery and transformation. Could modern approaches like augmented or virtual reality or immersive computer game environments help here? We should at least try this out, with the help of MRI- and other scanning methods the effects can be determined and effective treatment or tripping protocols established. Electronic drugs are on their way, as a replacement of add-on for the more classic means to trip!

Better understanding happiness

One of the main questions we face, also in view of technological progress, robotics, changing notions about work and leisure, is what makes life worthwhile. Especially as modern technology, social alienation, robots and digital virtualization and isolation eats away at what is the most 'human' need, meaning, we will need to explore whatever can enhance our senses of meaning and happiness. Here even the question can be asked, whether more intelligence makes people more happy? Obviously we have developed (the Western, rational and technological type of) intelligence as a kind of evolutionary defense against adversity and stress, but have we passed the optimal level? Western people are, on average, more intelligent (in the Western definition) than the indigenous folks, but they lack social bonding, community and indeed, happiness. Material possessions, the individual goals over social responsibility, we know that more is not always better, but does this mean we should sacrifice career outlook for peace of mind, especially in the stressed ADHD generation, and allow the a joint at times, rather than feeding them the equally psycho-active Ritalin? Should we look into how Caesarian birth (with less risk of oxygen flaws but loads of artificial oxytocin) leads to more obesitas, ADHD and maybe even fertility problems (more IVF) or would considering cannabis or other herbal means at childbirth be a wiser route? Remember, Albert Hofmann found LSD looking for drugs to help childbirth! Intelligence versus happiness, what a trade-off and who researches this?

Much research lately went into what happiness is, into the subjective and the objective experience. With questionnaires one has tried to rank countries, cities, communities and people as being more or



less happy, trying to quantify happiness in mostly materialistic terms, or in how good the needs and goals of people (as for instance Maslow listed in his pyramid) were met. The amount of publications about happiness, mindfulness and how these relate for instance to health is dazzling. There is research and models by people like Martin Seligman, Mihaly Csikszentmihalyi (the Flow) and Jonathan Haidt, about happiness and health, about happiness and income, family situations and what not, but so far we hardly know what really makes us happy or gives meaning. Most research uses self-reporting and thus very subjective methods. Then Nobel prize winner Daniel Kahneman pointed out, that there is a big difference between what we see as happiness in retrospect, when filling out such questionnaires, or what we experience in the moment; the physiological processes happening in our psyche when we are happy or not. The difference is substantial, we are not good at remembering what we really felt.

Here the idea of mind-altering substances to secure some level of happiness comes to the rescue. Maybe we can use the psychedelic experience to figure out, what happiness is, beyond and in relation to the serotonin, oxytocin and dopamine levels and electric activity in our brains? Happiness has to do with fulfilling needs and goals (the Maslow hierarchy which includes material, social (love) and self realization needs), but also with meaning, and with hope (and fear). It is, apart from those neurotransmitter levels, a fairly illusory state that can be manipulated by many means, from outside or inside, like with drugs, electric signals, meditation, media, propaganda, religion. We are happy if our subjective expectations are met, but we tend to ignore the objective reality.

Especially the idea of meaning is very subjective, we can seek and find meaning in material things, in relations, but also in our relation with the otherworld, with ideals and lofty goals. Meaning is a matter of perspective and not a constant either. The factor time and its shadow in our mind can turn the whole meaning on its head. We can accept the most miserable conditions, just because we hope that in the future things will be better or on the other hand, not enjoy the present because we fear the future. A nice image is to see happiness as a balloon, going up and down, usually within a certain range of subjective happiness that may differ between individuals because their genetic imprint and the situation and circumstances they are in, with some but limited influence to change those circumstances. It is obviously a state of mind, it is subjective and it is not constant, we go up and down in happiness.

The psychedelic experience doesn't require us to label perception as illusion as Buddhist do, it shows this as a direct experience, if one can let go of the control. It has the advantage that it brings people in a (temporary) state of mystical ecstasy or happiness without the tedious work of meditating or ascetic exercises. The deeper insights, which can help to stabilize the happiness balloon, are easily lost on re-entry, but the fundamental release from nagging doubts, fears, needs and thoughts is comparable with what the experienced meditator or enlightened sage can achieve. It may be short lived and somewhat fake, but the psychedelic state does offer an opportunity to look into what constitutes the very individual happiness state and its root mechanisms.

The story of psychedelic experiences, be it with chemical or other means, is not yet finished. Research into new and other applications of substances and technologies will no doubt reveal more about how they affect our psyche, how this can help in healing, transformation and how we can optimize its use.

One of the important pointers is; we should not ignore how those ancient traditions explored our psyche. Let's integrate the psychedelic into all that hi-tech research! As we, with genetic engineering and use of data processing, implants, cyborg technology, etc. etc. might or will find ways to live longer, more healthy, etc. the insight in the essential questions about meaning and happiness become more relevant and that is where exploring the deep and dark parts of our psyche can help. The notion of a-mortal human beings, supported by replacement organs and nano-biotechnology and with a much longer lifespan may be the next step in the evolution of mankind, but the question then rises; what are we going to do, how do we keep life interesting?

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Ir. L. Sala (1949) is a physicist, economist, media entrepreneur, therapy researcher and prolific writer.

At www.lucsala.nl and www.academia.edu many of his articles, presentations and books are available as free downloads like

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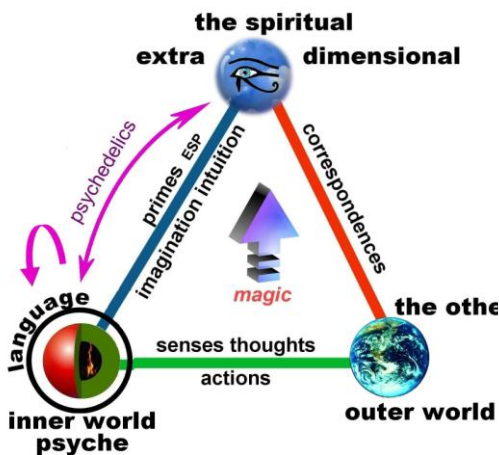
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also look for the mindliffv channel on Youtube

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Can we let go of our ego in the trip?

