



HEALING ADDICTIONS WITH TRANSCENDENTAL MEDITATION

THE ARCHITECTURE OF DREAMS

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*Went Downtown – Hastings and Main
Looking for relief from the pain
All I did was find
A one-way ticket on a Hellbound Train*

*On a farm not far away
Several friends were taken away
Rest their souls from the pain
End their ride on the Hellbound Train*

*Give me peace before I die
The track is laid out so well
We all live our private hell
Just more tickets on the Hellbound Train*

*Hellbound Train
Hellbound Train
One-way ticket on a Hellbound Train*

By Frank, written a few months before his death in memory of all addicts -particularly those said to have been murdered at the Pickton pig farm outside Vancouver

From Gabor Maté's *In the Realm of Hungry Ghosts*



“The frontiers of science are such that almost every morning many of our hypotheses of yesterday are found inadequate or in error.”

R. Buckminster Fuller

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Punir ou Guérir ?

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INTRODUCTION

Addiction: Punir ou Guérir ?

“The sirens of ancient Greece sang dangerous music. Nesting on a pile of human bones, on a rocky island off the coast of Sicily, the bizarre creatures, half-birds, half woman, sang to the sun and the rain; their song had the power to calm or to stroke the winds and to inflame men’s loins. Their music was irresistible, the words even more so than the melody. They promised knowledge to every man who came to them, ripe wisdom and a quickening of the spirit. Many a sailor was lured to their shore – where he’d pine away without food or drink, unable to break the sirens’ spell. The sirens’ music tempted sailors by offering an illusion of power, joy and wisdom. The music was sweet and seductive; the danger of losing one’s connection with reality, even losing one’s life, was apparent. But for the victims, the attraction was far more powerful than the concept of danger.”

Thomas Bulfinch, *The Age of Fable*

Among the many pleasures offered by modern life, one may have dreadful consequences overcoming the benefits of its use. If tobacco smoking is the cause of more than 5 million deaths a year worldwide⁵, the medical and financial cost of addiction are reaching epidemic levels, higher than any other health problems, cardiovascular diseases or cancers. The World Health Organization estimates that tobacco killed more than 100 millions smokers worldwide in the twentieth century, and may very probably kill one billion more in the 21st century if no effective strategies arise. In America, that is about 1 000 death a day. If alcohol needs a bit more than two years to equate tobacco, it holds responsibility for about 60 millions disability-adjusted life worldwide. But Iatrogenic illnesses –illnesses as a result of biomedical treatment- was estimated to be THE leading cause of death in the United States -before cardiovascular diseases and cancers- with more than 783 000 American citizen dying in 2006¹, which equals about 2 400 deaths a day. Yet despite the statistical evidences that alcohol, tobacco and pharmaceutical lobbies combined have killed more innocents than any other criminals in the history of humanity, who today is afraid of a cigarette, a glass of beer or a medically prescribed pill?

“Libertarians may concede that we would theoretically benefit from guidance, but they still complain that it would be impossible to deliver it, for the simple reason that at heart no one any longer knows what is good and bad.” Alain de Botton²

Indeed more than half of American crimes judged today are drug related, some due to illegal 'drugs' that never killed one individual in a century (chapter1), other which harm may be drastically reduced if viewed with compassionate care and scientific rigor rather than blunt moral judgement. But the State-sponsored corporations holocaust, invisible in the eyes of the masses, has not yet been fully unveiled. "Unfortunately, in democracy, mass opinions are often based upon a holy ignorance", warns us journalist Olivier Postel-Vinay³.

Above words, graphs, drawings and theories, this work is addressed to the reality of people suffering everyday whether mentally impaired or in jail until the rest of their existence, for whose 'life' have lost the joyful taste we all thrive for. At large, the aim is to understand the problem of substance addiction from a historical, legal and therapeutic perspective in order to guide the design of an addiction care centre in the city of Rotterdam. In what way political positions influence the care provided, what are the different therapeutic strategies developed and their impact on space. In definitive, how can architecture –and the socio-spatial environment at large- supports and re-shape medicine in the recovery process of drug addicts.

The history and ethnography of substance use and abuse tells us that different societies provided answers to such an issue through very diverse and contradictory means. The Christian church of Santiago enwalled alive five monks in 1692 for smoking during service, while Russian tsar Fréodorovitch took great pleasure in cutting the nose of tobacco smokers, and the head of those that kept on supporting their 'criminal' habit. But despite all veto imposed by Popes and governments since the seventeenth century, none gave birth to significant results, as the sirens continued to attract victims. To avoid their deadly illegal wishes while still listening their magnificent chants, the strategy of Odysseus is well known: he tied himself to his mast and plugged his sailors' hears with bees' wax. This is the common contemporary attitude. People at the top of social ladder consume in security and impunity while we blame those at the bottom for similar acts. We might well remain deaf toward the human need behind the use of psychoactive substances, treating illegal users as criminals, or we may suddenly uncover our ears: listening to drugs specific chants and real impact on health might help us to treat drug addiction as an uneasiness to be cured rather than an act to punish. But despite a deep –empirical- disbelief on its usefulness, whether taking nicotine or cocaine is good or bad is not a matter this research wishes to answer. Yet, a couple of moral questions remain: Why do the rich escape legality when the poor are left in jail? Why do the drugs Science consider most harmful are perceived the least dangerous ones by society, and inversely? Do our present legal systems, unanimously acknowledged as the symbol of moral and reason, remain ethically untouched when looked at more closely?

Previous head of Seattle police Norm Stamper, economy Nobel prize Gary Becker,

previous Brazilian president Fernando H. Cardoso, addiction experts Bruce Alexander and Dr. Gabor Maté, all agree that if our war on drugs is definitely lost, current policies are reproducing the exact same mistake than did alcohol prohibition in the 1920s, with increased consequences in criminality, corruption and public health. In South America, illegal traffic has made mafias so powerful that it is estimated they control 30% of the public territory⁴, killing journalists, policemen, or anyone threatening their profitable business: 596 heads chopped in the year 2011. According to French psychiatrist Olivier Chambon⁵, we must replace the -Just Say No!- claimed by Nancy Reagan to a -Just Say Know!-. Only by putting aside our subjective morality can we deal with such topic through objective scientific interests, and might uncover on the way an unexpected reality hidden behind the screen of mass medias.

But apart from the political background, this research wishes to answer an apparently odd and unusual question: Can architects provide answers to the drug problem? The implicit answer is that architecture do have a crucial role to play in healing addictions, and the scarcity of such scientific inquiry within actual biomedical conventions lies as the cause of the problem itself.

Goal

Transcendence as Therapy

It is hard to engage such a discussion at the root of our legal and medical institutions without recalling Michel Foucault discourse on biopower and biopolitics. That is, the understanding of economical and political power structures at stakes in the organization of public health, and their consequential tension with individuals or citizens. A noopower, or noopolitic, acting on the mind while -bio- acts on the body, could in the voices of philosophical critiques restore the exercise of freedom and creative resistance⁶. Surprisingly enough did not the concept escape the realm of philosophy towards its practical applications in medicine and pharmacology. This research wishes to fill the gap, in a new perspective.

Drugs and addictions have become the key instruments of bio-power, in its various forms of seduction: cocaine, heroin, nicotine, prozac, ritaline, oil and money, spinal chord of our economy of wealth and medical consumerism, sirens and fuel of a corporate oligarchy which despite the current financial crisis has not yet shown consequent signs of moral collapse. Such a moral collapse, or a true drug-free world would see birth only in the establishment of a noopolitic, or a new politic of the mind laying down the basis for the freedom of resistance of consciousness towards the sirens of biopower: A noomedicine that would heal addictions to alcohol, crack and profit with Transcendental Meditation (chapter2). Indeed how could medical science ever put an end to addictive behaviours when its economical power structures exclusively rely upon strengthening citizens' addictions to consumption thanks to their own addiction to profit?

“In our materialist society, with our attachment to ego and gratification, few of us escape the lure of addictive behaviors. Only our blindness and self-flattery stand in the way of seeing that the severely addicted are people who have suffered more than the rest of us but who share a profound commonality with the majority of “respectable” citizens.”⁷

One would be entrenched in denial not to see that the still strictly materialist bio-based industrial approach to toxicology and psychiatry is a human failure. In Alex Wodak's words –director of alcohol and drug service at Sydney's St. Vincent's hospital- “What we are doing hasn't worked, it's never going to work, and we need to change our whole approach. Tinkering around the edges isn't going to make a difference.”⁷

Indeed current medical procedures have left many drug addicts sceptical in the belief that orthodox pharmacological treatments can be of any help in a long-term basis as almost none manage to stop consumption after their cure and the relapse rate remains alarmingly high. A moral biopower, socially inefficient, yet harmful: Methadone, the most prescribed medical substitute for opiate addiction, is killing today more people than Heroin (see next).

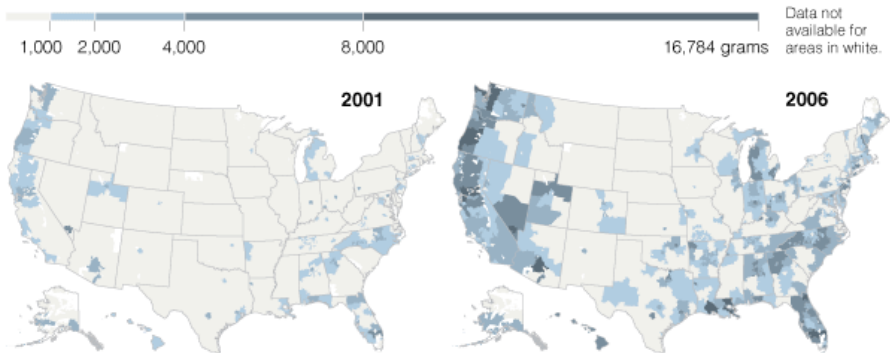
In the light of such inquiry a radically new paradigm has become increasingly necessary, both in respect for suffering victims which human rights continues to be denied and whose petty crimes are nothing in comparison to the grand criminal corruption and iatrogenic mass over-kill that today governs our globalized world, and for the well-being of public safety and the common good at large. French magistrate Renaud Van Ruymbeke noted now sixteen years ago:

“Underground and illegal financial masses have become such that the world economy cannot function without it. This will be the challenge of the next century. What are the judges doing? They suit small thieves and punish them as if nothing had changed. A consequent robbery lies between 3 000 and 8 000 euros, an important hold-up up to 15 000 to 30 000 euros. This sums must be compared to those that passes daily between the hands of the grand traffickers and offenders in white collars. The dozens of millions stays under cover from any law suit, protected by impassable boundaries, while just a few computer manipulations assured to place dirty money in a safe place. (...) Tribunals sanction small drug re-sellers from the most precarious layers of society. But the provider (...) will never be dismantled. Impunity is also guaranteed by complaisant Swiss bankers or managers hidden in other fiscal paradise, not to mention their shareholder. (...) A seven years old child would understand the absurdity of the present situation. Hypocrisy is total.”⁸

The Methadone Boom

Distribution of methadone per 100,000 people by three-digit ZIP code regions

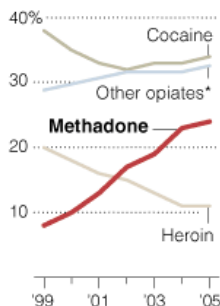
Legitimate distribution to hospitals, pharmacies, practitioners and teaching institutions.



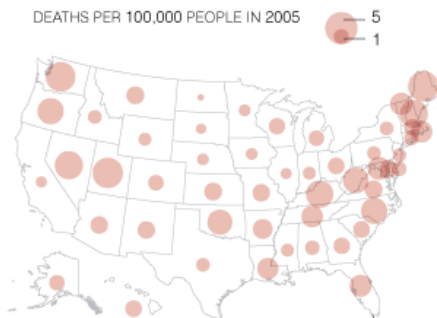
Methadone-related poisoning deaths

Figures reported by each state from death certificates, which federal officials say may represent undercounting. Includes instances in which multiple drugs may have been present.

PCT. OF NARCOTIC-RELATED POISONING DEATHS (in which drug was named causal factor)



DEATHS PER 100,000 PEOPLE IN 2005



*Includes morphine, oxycodone and hydrocodone.

Florida had the highest number of actual deaths.

AGE OF THOSE WHO DIED IN 2005

- 14% Less than 24 years
- 22% 25-34 years
- 27% 35-44 years
- 29% 45-54 years
- 8% 55 years and older

FARHANA HOSSAIN/THE NEW YORK TIMES

Since then Biopolitical madness still runs the world, help is poorly provided to poor criminals that endanger our neighbourhoods, while the State-sponsored and State-condemned biomafias stand all mighty. In this field the Dutch have now 20 years of advance than the rest of modern civilizations: shifting in the mid-nineties from punishment to care for the poor, their empty jails are now being transformed in fancy hotels; and Amsterdam, despite the blind prejudices of foreign puritans, is without a doubt among the safest capital to live in. May they serve as an example for other Foucauldian 'Governmentalities'. Philosophers have eloquently discussed, while prisons kept on filling in. If in the Netherlands Foucault is now almost a dead figure, pretty much anywhere else he is more than ever alive. This project stands for a foolish idea: Let us kill Foucault once and for all; let us make his criticisms definitely obsolete; instead of jails and detox of Biopower let us build Architectures of Noopower, or Architectures of Dreams, to find an alternative path to deal with the issue of addiction of all sorts when the old ones don't work through the therapeutic use of altered-states of consciousness, or lucid dreaming, deep states of transcendence.

Such architecture of dreams would in the first place abandon an old dream, the American Dream, which self-oriented consumerist dogma condemned the one that arrived in the monopoly game of life after the monopolies have been established to a death in slow motion. Addicts are not the problem of our civilizations, but rather the manifestation of such socio-economical paradigm primarily addressing the needs of those that will better sacrifice their opponents on the altar of the free-market system.

Architecture is then to be seen in a large sense:

The architecture of social injustice

–how did we end up punishing people in pain after millenaries of common medicinal opiate use,
(chapter 1)

The architecture of consciousness

–how does the brain become addicted and how can it heal,
(chapter 2,3,4,5&6)

The architecture of matter

–how can buildings support healing.
(chapter 3&5)

Despite the careful attention taken by modern science to classify every piece of knowledge into isolated compartments, I doubt anything be solved until understood holistically; that is economically, politically, biologically, psychologically, philosophically, theologically, medically and architecturally.

Method

Evidence-Based-Design as Oxymoron

Since the last couple of decades, an increasing number of studies coming from the fields of medicine and social sciences had started to explore the relationship between human behaviour and its environmental –urban and architectural– conditions. Evidence Based Design –EBD– is a recent field of research promoting the use of scientifically proven data in order to inform and guide the design process of architectural environments.

Such praise for Cartesian scientific directives over empirical intuitions reflected the shift biomedicine undertook decades earlier through the petro-chemical age of industrial universalization now freed from the old doctrines of religious superstitions. The search for biological evidences -which successfully got rid of tuberculosis, polio and diphtheria among other biological threats and exponentially developed surgical practices- accelerated the greatest divorce western medicine ever underwent: a divorce between science and spirituality, between the somatic and the psychic. Indeed in such a self-proclaimed evidence-based paradigm immaterial intentions and subjective beliefs ceased to matter much, if they did not disappear at all from the scientific endeavour. But to re-position today the role of subjective intentionality as first noomedical leitmotiv is to open up towards the possibility that such divorce is nothing but illusory.

In other words, can transcendence be tackled in contemporary scientific terms, and if so, can a spiritual setting belong to what is now testified as solidly “evidence-based” ?

Today an increasing number of neuroscientists – that Mario Beauregard, Bruce Lipton, Jeffrey Schwartz, Andrew Newberg, John Hagelin, Esther Sternberg, Richie Davidson, Rupert Sheldrake or Olivier Chambon represents (among others)- believe that a significant amount of empirical data has now accumulated to embark biomedicine towards a major paradigm shift to enter a –post materialist- era. A scientific turn where the mind as immaterial force governs the structure of biological matter, a shift modern physics operated a century earlier with the development of quantum theories but that has not yet fully transcended the realm of medicine. Commonly named neurotheology, contemplative neuroscience, quantum healing or energy medicine is what I define as noomedicine, in opposition to and complementarity with biomedicine. What rest as the old souvenir of a failed sixties revolution for mind ownership is today rigorously approachable with the tools of neuroscience, what this essay wishes to demonstrate.

If such a renewed approach to EBD intend to re-gather priests and psychiatrists, it also wish to re-gather scientists and artists -doctors and architects- , two other distinct human races that in our climate of over-specialization have practical-

ly ceased to communicate. As scientific reason and imaginative creation tend to behave more as mutual enemies rather than pacific friends, a paradox lies at the heart of the evidence-based-design schizophrenia. Yet, while the term exists only since the early 1980s in the work of Roger Ulrich and Kirk Hamilton, its practice is rooted in ancestral beliefs and discourses. Indeed, the equation between truth and beauty can be traced since the early ages of architectural history. From the Greek Golden Means of proportions, the enlightenment ideals of fusion of nature and civilization epitomized in the neoclassical natural orders as symbols of reason, to the functionalist modernist machine, each style claimed to validate aesthetic decisions through rational means of universal truth. The sequences of illusions and disillusion through history proved that they were all bounded to an ephemeral temporal relativity. Beliefs and ideals changed, and it is undoubtedly the essence of science itself to be an on-going process of rupture and re-definition. If this inquiry implies that no absolute certainties could be proclaimed, no means for universal “standards of success” applied, yet such a radical statement of absolute subjectivity would mislead us in the opposite excess. Perhaps there are certainties. Some environment may undoubtedly enhance wellbeing –the view of a striking piece of land or universally acknowledged urban setting –while other may universally harm regardless of personal taste or cultural background– an hospital?

To go beyond aesthetic and reason, scientism or religionism, we might refer to the Buddhist philosophy of the ‘middle way’. Not to find some mid-point between the two but to transcend both ideas, unifying them in a balanced understanding is to follow the ‘middle way’. Poles are reconciled by a higher order of understanding.

Practices: Care or Cure?

Today three types of institutions deal with the recovery of drug addicts:

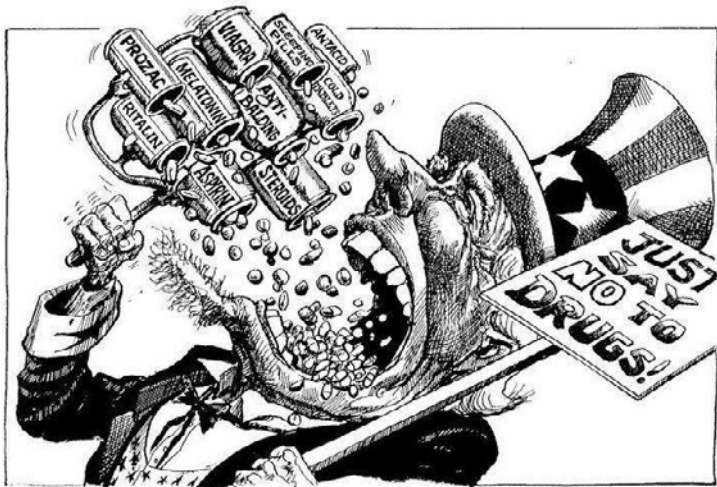
Cure centres –Detox– mostly host within hospitals, focuses principally on short term, aggressive, bio-medication treatment. “We will remove the chemicals in your brain that cause addiction.” So they say.

Care centres adopt the opposite approach, only offering host and safe conditions of use with no moral attempt to change patterns of use.

Care & Cure centres –Rehab– gather both strategies, offering long-term host, clean conditions of use, mixing conventional medications and alternative therapies aiming at changing patterns of use. This mostly takes part in three steps:

1-host, 2-educate, 3-reintegrate

We will deal with this one.



1 THE SEMANTIC SCAM

Drugs, Health & Politics

“When you have formed the chain of ideas in the heads of your citizens, you will then be able to pride yourselves on guiding them and being their masters. A stupid despot may constrain his slaves with iron chains; but a true politician binds them even more strongly by the chain of their own ideas; it is at the stable point of reason that he secures the end of the chain; this link is all the stronger in that we do not know of what it is made and we believe it to be our own work; despair and time eat away the bonds of iron and steel, but they are powerless against the habitual union of ideas, they can only tighten it still more; and on the soft fibres of the brain is founded the unshakable base of the soundest of Empires.”

J.M Servan, Discours sur l'administration de la justice criminelle, 1767

What is a drug?

While the popular definition includes any psychoactive substance, the medical definition precise: any substance implying dependency and toxicity.

Definitions are confusing as the word ‘drugs’ bears multiple semantics. Indeed the term is too commonly associated with illegal substances only. According to a recent classification of drug harmfulness (number of users excluded) by the Netherlands Institute of Public Health –RIVM-, alcohol is ranked second after crack, just before heroin and tobacco. Cannabis is eleventh, LSD eighteenth. Another study by the British medical journal The Lancet⁹ ranks alcohol in the first place, before heroin, crack, cocaine and tobacco.

According to their neuro-psychological effects, drugs can be briefly categorized within three groups:

Stimulants –Cocaine, Speed, Amphetamines, Nicotine, Caffeine- accelerate psychobiological functions (attention, awakening) and provoke euphoric feelings.

Depressants –Opiates (Heroin, Methadone, Morphine), Cannabis, Alcohol- slows it down, provoking sedative feelings.

Entheogens –LSD, Psilocybin, Ecstasy, Ketamine, DMT, Ibogaïne- don’t modify the speed but the quality and character of consciousness, revealing “a radically different perspective on the contents and processes of thoughts”⁵. Science also qualifies them as ‘Hallucinogens’, ‘Introspective’ substances, ‘Psychedelics’, or ‘Entactogens/ Empathogens’ emphasizing a better connection to the self, to others and to spirits –Theos, for God in ancient Greek.

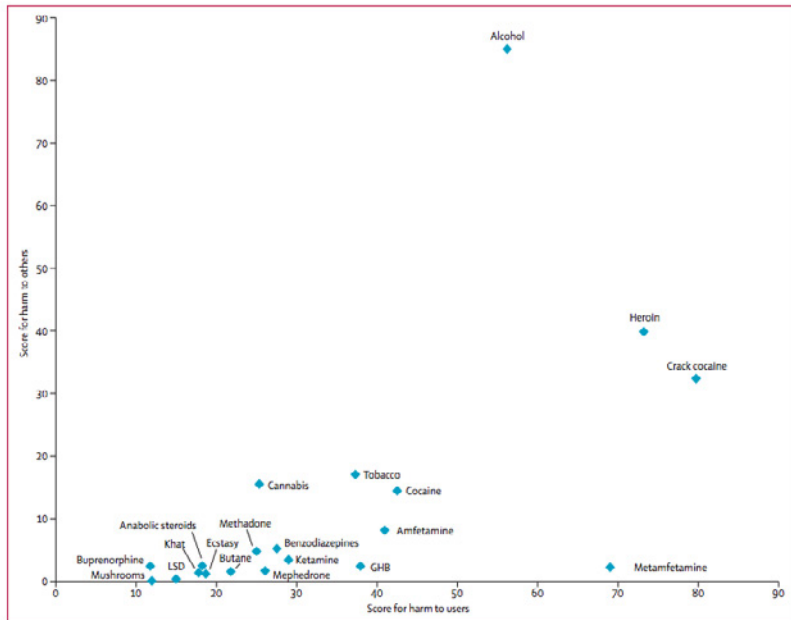


Figure 3: Drugs shown for their harm to users and harm to others
 LSD=lysergic acid diethylamide. GHB=γ hydroxybutyric acid.

To consider ‘drugs’ at large from a legal rather than pharmacological perspective is probably the most profound mistake one can ever do dealing with the issue of addiction. Yet semantic meanings evolved in such a way that we all do it almost every time.

Activating the dopamine and endorphin neurological receptors, most depressant and stimulants work as painkillers, and can thus induce high levels of dependency and toxicity.

Oppositely entheogens primarily activate serotonin receptors, and decades of international scientific research had proven that they imply absolutely no dependency nor toxicity (Hofmann, Grof, Shanon, Chambon, Maté...) They don’t work nor or used as pain-killers, and according to the strict medical definition, entheogens are NOT drugs. Not one user of entheogen -apart some rare cases with ecstasy, mid-way between a stimulant and an entheogen- is hosted in an addiction care centre today for behavioural disorders. But regarding the intense psychoactive effect they induce and their necessary precaution of use, we should not blame popular language for calling them as such.

Such a brief introductory overview uncovers a non-intuitive reality: the fact that a drug become legal or not has absolutely nothing to do with its level of harmfulness. Alcohol is considered by cognitive science the most dangerous drug for society; it is also the most affordable and consumed. Sociology Professor at Yale University William Graham Sumner remarks that “in all studies –from rats to lawyers- alcohol is the only thing you can find linked to violence”¹⁰. In the Netherlands over the year 2009, 8863 addiction care clients suffered from cannabis disorders, 9993 from cocaine, 12 466 from opiates -heroin and methadone-, 1504 from amphetamines and 34 646 from alcohol¹¹. In comparison, very few -154- are suffering from ecstasy disorders. The European Monitory Centre for Drugs and Drug Addiction reports that “necessary treatment or death induced by the use of ecstasy are quite rare”¹². Recreational drugs have caused the deaths of around 21 100 Dutch citizen in 2009¹³: 19 200 from tobacco, 1800 from alcohol, 100 from illegal sources -opiates, crack, cocaine and amphetamines-. In the US, official policies have estimated that an average of 440 000 persons dies every year from tobacco and 75 000 from alcohol, while over the past century not one death have been recorded from direct use of LSD, and in the year 2009 at least, not one death by cannabis in the Netherlands.

Table 1a Key Data on Substance Use

	Cannabis	Cocaine	Opiates ^I	Ecstasy	Amphetamine	Alcohol	Tobacco
General Population Usage (2009)							
Percentage of recent users, 15-64 yrs ^{II}	7.0%	1.2%	0.1%	1.4%	0.4%	84%	-
Percentage of current users, 15-64 yrs ^{II}	4.2%	0.5%	0.1%	0.4%	0.2%	76%	25% (daily smoking)
Trend recent use (2001-2005) ^{III}	Stable	Stable	Stable	Stable	Stable	Stable	Decline
Trend recent use (2005-2009) ^{III}						Slight Decline	Decline ^{IV}
International Comparison	Average	Average	Low/medium	Above Average	Below Average	Average	Average
Number of problem users							
	29 300 (dependence) 40 200 (misuse)	Unknown	± 18 000	Unknown	Unknown	1 400 000 ^{VIII}	±1 000 000 ^{IX}
Number of Addiction Care clients (2009)	Cannabis	Cocaine	Opiates	Ecstasy	Amphetamine	Alcohol	Tobacco
Substance as primary problem	8 863	9 993	12 466	154	1 504	34 646	n.a.
Substance as secondary problem	6 107	7 968	1 966	451	989	5 905	
Trend (2002-2009)	Rise	Rise until 2004, then stable	Decline	Slight Decline	Rise until 2007, then stable	Rise	n.a.
Number of hospital admissions (2009)							
Misuse/dependence as main diagnosis	75	100	65	73		5 900	Unknown
Misuse/dependence as secondary diagnosis	520	637	500	127		12 459	
Trend (2002 - 2009)	Rise	Rise	Decline	Rise		Rise	Unknown
Registered deaths (2009) ^X							
	Virtually no primary deaths	30 (primary)	52 (primary)	<5		724 (primary) ^{XI} 1 037 (sec.)	19 245 (primary+sec.)

I. Chiefly heroin (and methadone). II. Recent use: in the past year; current use is in the past month. III. Owing to differences in research methods, the data for drug use in 2005 and 2009 are not comparable. The same method was used for the measurements conducted in 2001 and 2005, which means a trend can be determined for this period. For alcohol and tobacco, the research methods were the same in 2005 and 2009, which means a trend can be determined for use of these substances in this period. IV. Trend differs according to source. Measure used: daily smoking (see § 7.2). V. Decline continues in 2009 among school-goers aged 12-16. VI. Between 2003 and 2007. Decline continues in 2009 among school-goers aged 12-16. VII. Decline stagnates between 2005 and 2009, among school-goers aged 12-16. VIII. Based on heavy drinkers (six units or more on at least one day a week). Circa 478,000 people in 2007-2009 were diagnosed with alcohol misuse or dependence. IX. Based on heavy smokers (20 or more cigarettes a day). X. Primary deaths: substance as primary (underlying) cause of death. Secondary deaths: substance as secondary cause of death (contribution factor or complication). XI. Not taking account of road deaths or cancer-related deaths.

A short history of drug policies

“One does not need... collective pathology as in the Nazi era, in which legal institutions still appeared to function but had in fact acquired some aspects of madness. The potential for such madness is present even in ordinary times and places.”

Otto Walter Weyrauch

To legitimize current policies as symbol of an eternal truth is to forget the reality of history. As there is absolutely no direct link between harmfulness and legality, the implicit meaning of prohibition must have found its interests elsewhere. “Legal status of a drug is determined by its standing in a culture and by what people believe about its users”¹³ points down historian Richard Lawrence Miller, factors which have “nothing to do with chemistry”, nor neurobiology. Indeed the shift of policies over the last two centuries have never been based on objective consideration for public health, but rather a mixture of private economical interests, social segregation, pseudo-scientific moral values, fear, and mostly: ignorance.

Until the late nineteenth century, consuming opium was considered a fundamental civic right. Such a consistent symbol of occidental moral and financial good that China’s decision to make its production illegal lead the British Empire to declare the first wars to the Qing Dynasty. Holding on the business of opium killed 40 000 soldiers.

In the early twentieth century, most of the drugs considered illegal today were common, doctors prescribed cocaine, heroin and morphine to heal pains and provoke general feelings of wellbeing, users were numerous and those that abused from it were taken care of sympathetically by society. How did what mattered as a public health issue became a criminal issue? How did highly valued commercial products became associated with evil dangers, when evil dangers such as alcohol remained a highly valued commodity?

R.L. Miller opens up a fascinating perspective: the war on drugs had never been on on anything at all that a on race; as the initial target of each law never considered the substance itself, but its users. The birth of prohibition took place in the west coast in the early twentieth century, in a climax of severe racial segregation. Why were drugs allowed in Mississippi and suddenly forbidden in California? Precisely because it hosted many immigrant workers: Chinese smoked opium, Blacks cocaine, Mexicans marijuana. Because the success of foreign workers began to threaten white’s jobs, politicians came up with strategies to criminalize minorities for habits Americans didn’t have.

“What was being outlawed was not the fact of being Chinese or Mexican, but the habits associated with being Chinese or Mexicans. (...) Drugs laws set up a very dangerous precedent of racial control.”

“Until the late nineteenth century, employers have encouraged workers to use amphetamines, cocaine, opiates, marijuana and nicotine on the job to increase productivity. (...) Productive opiate addicts were cherished members of the community and their affliction was viewed with compassion. Certain groups who used certain drugs were hated. But hatred directed against Chinese opium users in the 1870s, African-American cocaine users in the 1890s, Mexican marijuana users in the 1930s, and hippie LSD users in the 1960s had little to do with their drug use. (...) Leisure time opium smoking was a habit largely limited to Chinese immigrants who could then be jailed in order to create job openings for white males.¹³”

If alcohol was for a while strictly regulated in the United States, its ancient rooting within European history and American habits preserved its immunity. Yet the federal prohibition of alcohol never targeted users, but factories: manufacture and sale was the only illegal activity, as politicians knew they risked imprisoning two thirds of the country otherwise.

Yet the story of other drugs, mainly as a consequence of the great mass migration that occurred in America after the abolition of slavery, is of a very different kind. If being an alcoholic had never been a status to criminalize by itself, other drug laws invented the notion of a “status crime”: Judging not on what the person does against society but on what persons are, punishing people that mind only their own business. Users first were targeted, and implicitly, minorities. How to explain otherwise that a specific racial group make a small minority of the total population of a country while making the majority of the people in jail?

If never claimed as such, the origins of the War on drugs is just another story of how ordinary people can target for destruction their neighbours during economical crisis for which habits, beliefs or appearance differs from theirs. It seems we all need our own enemy, blaming our fears hidden within towards an arbitrary enemy outside. If today racial segregation is not as prominent as it used to be in America, punitive drug laws deepens the least advantaged classes of society into their inescapable fate, as indeed jail is not a place where you have access to any treatment. “Why don’t we just kill the poor?” asks writer and journalist David Simon, “We’ll all be better of. That’s what the war on drug had become”.

Whether the process of destruction appears in Germany in the 1930s or in America in the 1990s does not make a big difference, Miller notices. Yet many would most probably feel quite uncomfortable when told that the spirit that gave birth to the holocaust may still be in every one of us. In 1946, Yiddish linguist Max Weinreich warned us already, yet his fears remained unheard:

“Is Nazism a German problem only? Is its menace over the world at large, both as instrumentality of Germany’s national politics and as a supra-national appeal to the meanest in human nature? (...)

Are the Jews the only minority that is threatened by Nazism and all it stands for? Is it too academic to ask: what minority is next to be singled out – or is it a group that is still to be molded into and elevated to the rank of a minority?”¹⁴

If it is now of common scientific knowledge, but as quickly forgotten in popular beliefs –as propaganda tells us the opposite– that drug use does not lead to being poor or insane, nor is it genetically linked to be Black or Mexican. Drug users are ordinary people. Our doctors, physicians, politicians, businessmen, artists, are on cocaine, fewer on heroin, yet they live very successful lives. We know that practically all American presidents were on stimulants, as anyone that knows what a coke addict look like agree to cut his hand if Nicolas Sarkozy is not one. Neither Hitler nor most of his chancellors were Aryan either.

And among all those reaching the age of eighteen, it is often the one that do not enjoy getting wasted on alcohol that are considered socially abnormal.

But in those which mental strength still resists the call of the sirens, two attitudes stand still: a form of Cartesian rationality or spiritual integrity. Yet those two myths ought to be deconstructed:

The fact that René Descartes enjoyed living in Amsterdam to benefit, as he wrote himself, from substantial delights to be found nowhere else cannot be discussed, yet it is absurdly in his name that we feel proud of resisting the drug appeal. Not that resisting its appeal is absurd, but claiming we do while smoking tobacco and drinking alcohol is.

The same goes for religions. For renowned American anthropologist Weston La Barre, the origin of the human concept of the divine, or any form of spirituality, could most probably not have occurred without the ancestral relationship tribes always had with entheogenic plants -“generating the divine within”- such as Iboga or Ayahuasca, commonly used worldwide from pre-history until today in traditional societies. Shamanism gave birth to religions, which origins is hardly dissociable from the use of those natural substances. Professor of cognitive psychology at the Hebrew university of Jerusalem Benny Shanon argues indeed that there are few chances that the event of Moses in Mt. Sinai be anything more than “an event gathering Moses and the Israeli people under the effects of hallucinogens”¹⁵. Yet Christian believers blame substance use in the name of God, while the god in which they believe in is most probably nothing more than the invention of a Great mystic under the influence of the Peganum Harmala plant, an hallucinating bush that occupies the Egyptian Sinai desert, and is extensively described in the Bible as the holy Burning Bush.

But one must be poorly informed today not to see that the sinew of war had never been anything else than private corporations profit. The invention of precise

medications to treat specific issues without hedonist means announced the end of the legal commerce of the old drugs –tobacco and alcohol, firmly rooted within the European and American industry, excepted. But if justice mirrored the laws of the market system rather than those of biology, whether the fact that aspirin had made therapeutic use of opiate superfluous while synthesised novocaine ended the medical use of cocaine is good or bad is not matter of discussion here. Yet when an important proportion of our businessmen and doctors are on speed or cocaine to support their workaholism while the lower classes thrown in jail for consuming crack, time might have come to unveil the hypocrisy.

The progressive separation of church and state before the First World War may add a third element of explanation. The loss of the right to consume psychoactive substances in the early twentieth century implicitly meant that the mind and body of individuals shifted from the priest to the state ownership, the use of 'drugs' in a traditional society was ruled by custom or religion. Having lost any moral authority, a liberal state could only rely on external rules, unable to differentiate from moderate to dangerous use. "Legal constraints replaced social auto-discipline"³. Surprisingly, the modern secular strive for freedom provoked the end of the freedom of drug use. Why alcohol remained unregulated in most countries unlike the other drugs lies as a scientific non-sense only generalized ignorance and commercial interests can explain. And if few would argue that Amsterdam is a tolerant and liberal city leaving each individual free-will towards his mental health, nothing can be further away from the truth. The Dutch have among the toughest penalties for street drinking -ignoring the law I myself had to hardly negotiate with the cops to avoid a fine for holding a beer in the street-, 90°C Alcohol is strictly prohibited – which I realized after my failed attempt to distil some home made limoncello- and pharmaceutical medications are prescribed only with tough doctors advice, never sold on street-shops neither advertised. It might surprise many, but the Dutch are probably the least liberal country in this western world, among the few where politics still have power over economical forces, as they seem to be the only ones to have study drug science empirically and efficiently rather than corrupted by industrial interests or existing prejudices.

But scientific truth will hardly defeat the incessant drug propaganda awakening our deep unconscious and collective fears that psychoanalyst Carl Jung called 'archetypes', orchestrated by those who benefit from the system whether they are tobacco & alcohol producers or medication providers. Obviously what the young girl fear as the Big Bad Wolf is then later called Crack or Heroin in the adult world, humanly embodied in the flesh of the addict himself. But fearing the Big Bad archetype is the best way to prevent a truer understanding of the nature of wolves: in reality, weak and fragile creatures facing the threat of human's domination on earth, pacific when their needs are provided, potentially aggressive when they're not. The analogy with the drug addict becomes clear: individuals facing imminent

extinction as most die quite young, but the specie itself is far from being extinct. Indeed its global demography sadly increases day by day.

Towards confessing the dead-end

"There is nothing to fear but fear itself:" Martin Luther king

Coined by Richard Nixon in the 1970s, the 'War on Drugs' has left many political analysts puzzled by its inefficiency. During the last forty years, the United States spent 500 billions of dollar to diminish availability and harmfulness of products. As only consequence, cocaine had become more affordable than ever, its price diminished by half from 1993 to 2003³. Offer and demand exploded, and the level of purity and harmfulness of the substances, because controlled by parallel illegal markets for whom only profit matter, impossible to regulate. More and more users are arrested for consuming substances scientifically considered less harmful than alcohol and tobacco, sent to jail where they learn how to grow their anger against the present system and become real criminals. Economy Harvard professor Jeffrey Miron is stunned by our inability to treat illegal drugs like alcohol, regardless the dramatic failure of alcohol prohibition in the 1920s. Pursuing crimes without victims, the violence engendered by the collateral damage of the war on drugs had outclassed any harm the substances can do to their users themselves. The destruction of one life in jail, the death by contamination of unclean syringe, as the thousands of crimes committed by gangs to hold on their domination of the market, are only consequences of prohibition. Regardless of its consequences, current repressive drug policies carry on increasing costs engendered by violence, increase the risk of overdose, make real criminals richer and powerful, ostracize poor users while definitely keeping them away from a society where they can possibly be successful, for which more suffering can only lead to more drug use, and weakens the credibility of the law –as almost half of Americans confess having tried marijuana.

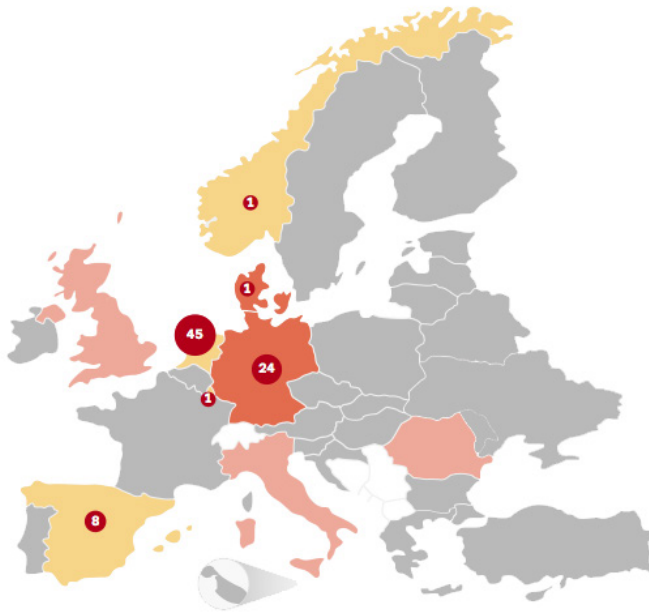
"What sum of pain can engender a politic before confessing its failure and start its revision?" asks Clive Crook in the Financial Times.

The answer might come from Portugal, who in 2001 decriminalized possession of all drugs, substituting the cost of a stay in jail by a therapy offer. Previous European leaders of hard drug consumption, an evaluation study published in 2009 shows that during the five years following the shift in policy, the use of drugs, number of overdose and VIH infections radically declined. "On every criteria, decriminalization revealed to be a plangent success. It allowed the government to manage and control the drug problem more efficiently than any other western country"³,

concludes the article. Portugal is now the European country where the proportion of young marijuana users is lowest, while the French, with the most repressive European policies, are the biggest consumers.

The Netherlands followed a different path. While users –most entheogens and marijuana excepted– are still punished, the Dutch government was the first in Europe to re-evaluate the efficiency of its policies. Until the late nineties, reducing nuisance was aimed through mostly repressive measures, shutting down open drug scenes such as ‘Platform zero’ in Rotterdam. After quickly understanding that the only consequence was a further spreading out of the disturbances throughout the city, but no harm reduction at all, the government changed its strategy. In 1996 started the project ‘Safe & Clean’, opening consumption rooms and supported housing all over the country to better support users recovery. Evaluations proved the initiative to be so successful that the project was extended under the name ‘Without a Roof’. If problematic drug use is non dissociable from homelessness, loss of income and social stability, the Dutch were the first to acknowledge that striking the ‘disease’ on its cause rather than only its consequences would solve a lot of problems. They were the first modern sailors to uncover the bees’ wax Nixon and Reagan plugged within their ears: the drop out rate reached 15% in two years, up to 27% until recently¹⁵. The Dutch government acknowledged that no matter how hard it tries it could not eradicate drug use. Because as long as poverty and unemployment strikes there will always be Rotterdammers using crack, Dutch policies turned their aim towards their re-socialization rather than strengthening their marginalization through stigmatization, thus succeeding at reducing dangers and nuisances far more efficiently to focus on big dealers only.

The Netherlands understood before everyone else the need to focus on the wellbeing of users in order to start a recovery process. Few policies today can be proud of such results, hardly able to face the failure of inherited practices about which we have forgotten the ugly meanings of its original significance.

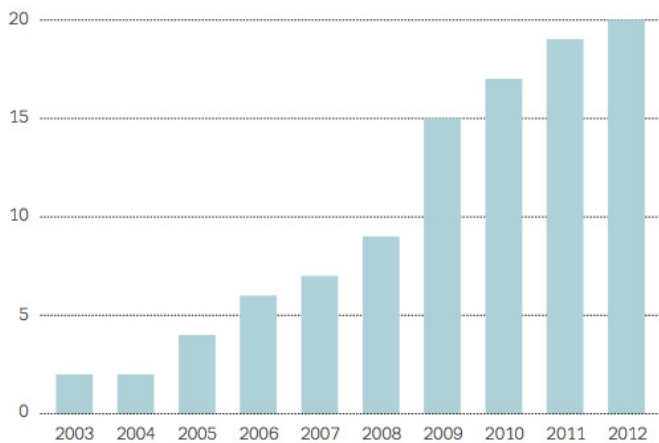


Interventions

- Salles de consommation de drogue à moindre risque
- Programmes de naloxone à prendre à domicile
- Les deux interventions
- Aucune donnée
- 9 Nombre de salles de consommation de drogue

HARM-REDUCTION CONSUMPTION ROOM IN EUROPE

source: emcdda 2013



**TOTAL NUMBER OF COUNTRY THAT HAVE EVALUATED
THEIR DRUG-POLICY**

source: emcdda 2013

COUNTERTHINK



2 FROM BIOMEDICINE TO NOOMEDICINE

Medication or Meditation?

“There is one additional factor that has helped to control economic depression, and that is a better understanding of their development.”

Robert Theobald

To look for the scientific cause of the current epidemic of addiction might appear enlightening within conventions that instead tend to focus solely on controlling its symptoms. The current biomedical definition assumes that causes are at least 50% genetic, but few would dare to recognize that the cause of the problem may lie into how science views the problem rather than into the problem itself. My belief is that mainstream science has not yet found solutions to addictions precisely because of the belief that it could resolve it by itself, or to recall anthropologist Edward. T. Hall, that western man has created chaos by virtue of the Cartesian/Newtonian belief that it could control everything. In other words, it is time to offer back addicts conscious control -or noopower- over their own therapy.

But to understand how such power was lost one must go back in the early age of the modern science, the age when according to René Descartes, human existence was nothing but an ordered assembly of tubes only differing from those of the industry by their reluctance of being seen by our naked eyes. A position confirmed centuries later in the words of co-discover of the DNA code James Watson that our joys, sorrows, memories and ambitions, identity and free will are “nothing more than a vast assembly of nerve cells and their associated molecules¹⁶.” Towards such a view of human nature reducing the mind to a machinery process, many argued that the doctrine was insufficient, reductionist and potentially dangerous. But if the tools by which science operated at the time of Newton and Descartes could not observe how the power of consciousness interfere with sub-biological processes, only from that time onwards did the Universe ceased to be seen as a great thought but made up of biological and physical entities observable in equations and microscopes, and transcribed in a medical perspective where “matter is all that matter”. If causes are really genetic, then all that is left to blame is bad luck or heredity, while the bio-tech industry will provide us all sorts of genetically engineered consumer commodities to deal with the symptoms. In such a new world, medicine thus ceased from being an intermediary between unfortunate souls and spiritual guidance to become more like a great garage which mission would be to repair the defaulted mechanic. The hospital therefore expressed through history the cultural values in which illness is understood and cured, and reveals the underlying forces of power at stake in order to achieve such goals. A faith in God displaced by the

faith in scientific progress, mechanisms of absolute measurability imposed its new reason, its new moral: the religion of the machine. But once we've killed the Great Spirit, what place is left for our own fragile spirits? If Albert Einstein remarked that "it is harder to break a prejudice than an atom", the exclusive emphasis on chemical body mechanisms over immeasurable spiritual facts thus provided the perfect ground for technical means to fully exercise its hold. The new church of bio-power thus overcame the old churches of noo-power, the proselyte indoctrination of human minds in puritan forms. But in the process, we may have lost the original, compassionate message of religions.

Announcing the disenchantment of the world paired to the rationalization process, sociologist Max Weber warned us already more than a century ago. The reign of reason can only lead to the tragedy of unhappiness, some have claimed in his name. The present advances in the understanding of our brains is now revealing that the incapacity of modern medicine to heal despair and addictive behaviours did not occur because of an excessive use of reason, but rather a mis-use of reason, or mis-perceptions, that have dissociated mind and matter and abstracted human beings from both internal psychic emotions and the environment in which they interact. What we can call "Set & Setting". Pioneer stem-cell biologist Bruce Lipton affirms that "people perish from lack of hidden knowledge", and once the knowledge will come to the public, modern civilization might take a radical turn. As he put it:

"Medical doctors are caught between an intellectual rock and a corporate hard place; they are pawns in the huge medical industrial complex. Their healing abilities are hobbled by an archaic medical education founded on a Newtonian, matter-only Universe. Unfortunately, that philosophy went out of vogue seventy-five years ago, when physicists officially adopted quantum mechanics and recognized that the Universe is actually made out of energy. In their postgraduate years, those same doctors receive their continuing education about pharmaceutical products from drug reps, the errand boys of the corporate healthcare industry. Essentially, these non-professionals, whose primary goal is to sell product, provide doctors with 'information' about the efficacy of new drugs. Drug companies freely offer this 'education' so they can persuade doctors to 'push' their products. It is evident that the massive quantities of drugs prescribed in this country violate the Hippocratic oath taken by all doctors to 'first do not harm'. We have been programmed by pharmaceutical corporations to become a nation of prescription drug-poping junkies with tragic results. We need to step back and incorporate the discoveries of quantum physics into biomedicine so that we can create a new, safer system of medicine that is attuned to the laws of nature."¹⁷

Neuroscience tells us today that the Cartesian edifice of western thought is about to collapse. Our daily lives, thoughts and unconscious beliefs do matter much in our recovery processes, but what a dozen of years ago was still filled with skep-

ticism within academia can now hardly be empirically invalidated. The field of Psychoneuroimmunology has now emerged over the old bio-mechanical model: "Canadian research have found that people abused in childhood have nearly 50 percent increased risks of cancer in adulthood."¹⁸ Even the risk of developing lung cancer due to tobacco smoking have been proven to be largely influenced by the repression of emotions, shows a study by British chest surgeon David Kissen in 1962. "The risk of lung cancer was five times higher in men who lacked the ability to express emotion effectively."¹⁸

We now know that stress greatly interacts with our immune system, and precipitated by depression, damage the process of DNA repair -the regulation of healthy tissues through natural death of cells biologists calls Apoptosis- which dis-regulation had shown to be the cause of a frightening number of pathologies, from "tumor protection, autoimmune and immunodeficiency diseases and neurodegenerative disorders" ¹⁸ , and is today a major field within cancer research.

A pioneering study in psychoneuroimmunology realized at the Medical University of Nijmegen in 2011 in the Netherlands may have profound consequences in the noopolitical battle for scientific truth. A team of 12 researchers in intensive care, neurology, cardiology, physiology and immunology empirically investigated whether focus awareness through meditative techniques could influence or not anatomic nervous system activity and innate immune response. Such theory been dismissed by biomedical authorities -and still is in most institutes- , any research of this type was mocked and the financing almost impossible to find, pretty much comprehensibly: Which drug corporation is suicidal enough to fund medical studies to rigorously testify that at the root of the present medical drugging paradigm lies an enormous scientific fraud?

They studied the body of Wim Hof, the famous Dutch Iceman known to resist extreme temperatures naked thanks to a zen-meditation technique he perfected himself, the man that claim we could all build ourselves a disease-immune body if we knew how to train our minds. The team measured his ex vivo cytokine response during meditation before and after an 80 min immersion in an ice bath while he was meditating, conclusions:

"The ex vivo pro- and anti-inflammatory cytokine response was greatly attenuated by concentration/meditation during ice immersion, accompanied by high levels of cortisol. In the endotoxemia experiment, concentration/meditation resulted in increased circulating concentrations of catecholamines, and plasma cortisol concentrations were higher than in any of the previously studied subjects. The subject's in vivo cytokine response and clinical symptoms following LPS administration were remarkably low compared with previously studied subjects.

The concentration/meditation technique employed by the iceman volunteer appears to evoke a controlled stress response. This response is characterized by sympathetic nervous system activation and subsequent catecholamine/cortisol release, which ap



pears to attenuate the innate immune response. (...) The iceman claims that he can teach others this technique within a relatively short time-frame (one week). Therefore, further investigations should establish whether the results obtained in the iceman can be reproduced in larger groups of individuals¹⁹.»

A full review of the experiment can be found on the article, and researches are in continuous process at the university of Nijmegen. But if the tone of the article is discreet, its political impact is huge. It might very much lead the industrial bioMafia to one day acknowledge that with proper preventive mind training, we don't need them at all.

But such a renewed noo-medical paradigm that takes its primacy in consciousness and subjective emotions over drugs and dead matter won't rise until studies of this kind are reproduced and stately financed. Yet Quantum mechanics has extensively demonstrated that a strictly materialist world-view is erroneous, as atoms and molecules do not solely exist by themselves but in interaction with an electro-magnetic energetic field, or *The Unified Field* which in Albert Einstein words constitutes the sole governing agency of the particle. Stress can then be theoretically seen as a negative force of the field –the stressful environment- exerted towards matter through perception, while a positive field enhance healing processes through promoting positive physiological change, which current discoveries on neuroplasticity radically confirms. Conscious thinking –through focused attention- and environmental influence do have profound influence in the way our neurogenesis is formed, as Fred Gage put it: “The connections between neurons can be increased or decreased based on experience, and even the total number of neurons can change in certain areas of the brain due to changes in experience and physical interaction with the environment.”²⁰

To meditate is then to change our perceptual relationship with *The Field*, to switch off inputs in order to self-promote positive physiological immune changes. The Mind governs Matter; the Cartesian dogma is definitively proven false.

Towards Quantum Addiction Therapy : Causes and Solutions

The outcomes of the new medical findings of quantum neuroplasticity into the biopolitics of addiction are vast. Indeed placing its cause into the environmental influence of the quantum field rather than mechanistic genetic determinism ask for a profound moral and medical change, one where lifestyle and social conditions reclaim their primary role in the scientific equation.

In a article entitled "Why Punish Pain? A hit of compassion could keep drugs from becoming a crime problem"²¹, dr. Gabor Maté question a society that is not able to understand the suffering of human beings already condemned by the injustice of their familial situation:

"Contrary to popular myth, no drug is inherently addictive. Only a small percentage of people who try alcohol or cocaine or even crystal meth go on to addictive use. What makes those people vulnerable? According to current brain research and developmental psychology, chemical and emotional vulnerability are the products not of genetic programming but of life experience. Most of the human brain's growth occurs after birth, and so physical and emotional interactions determine much of our neurological development—which brain areas will develop and how well, which patterns will be encoded, and so on. As such, each brain's circuitry and chemistry reflect individual life experiences as much as inherited tendencies.

Drugs affect the brain by binding to receptors on nerve cells. Opiates work on our built-in receptors for endorphins—the body's own, natural opiate-like substances that participate in many functions, including regulation of pain and mood.

(...) But the number of receptors and level of brain chemicals are not set at birth. Infant rats who get less grooming from their mothers end up with fewer natural "benzo" receptors in the part of the brain that controls anxiety. Brains of infant monkeys separated from their mothers for only a few days are measurably deficient in dopamine.

It is the same with human beings. Endorphins are released in the infant's brain when there are warm, non-stressed, calm interactions with the parenting figures. Endorphins, in turn, promote the growth of receptors and nerve cells, and the discharge of other important brain chemicals. The fewer endorphin-enhancing experiences in infancy and early childhood, the greater the need for external sources. Hence, a greater vulnerability to addictions.

What sets skid row addicts apart is the extreme degree of stress they had to endure early in life. (...) My patients' histories are chronicles of pain upon pain:

Carl, a 36-year-old Native man, was banished from one foster home after another, had dishwashing liquid poured down his throat for using foul language at age 5, and was tied to a chair in a dark room to control his hyperactivity. When angry at himself he gouges his foot with a knife as punishment.

(...) The most frequent source of hidden stress is the parents' own childhood histories that saddle them with emotional baggage they are not conscious of. What we are not aware of in ourselves, we pass on to our children. Stressed, anxious, or depressed parents have great difficulty initiating enough of those emotionally rewarding, endorphin-liberating interactions with their children. Later in life such children may experience a hit of heroin as the "warm, soft hug" my patient described: What they didn't get enough of before, they can now give themselves through a needle."

"One must have no mercy with people who are determined by fate to perish". If the phrase describes the marvellous absurdity of our present situation, it was not claimed by any lawyer nor expert in genetic control, but by Adolph Hitler in 1942. Yet "Most Americans are not better informed about drug users than most Germans were informed about Jews"¹³, R.L Miller recalls.

If the present machine age tends to make us forget that our capacity for recovery may reside not outside, but within ourselves, an ancient Chinese tale can illustrate such new path:

The young Tzu-Gung, asking an old man why he was working in his vegetable garden with his hands while he could dig much more with much little efforts using a wooden lever, received the following answer:

"I have heard my teacher say that whoever uses machines does all his work like a machine. He who does his work like a machine grows a heart like a machine, and he who carries the heart of a machine loses his simplicity. He who has lost his simplicity becomes unsure in the strivings of his soul. Uncertainty in the strivings of the soul is something which does not agree with honest sense. It is not that I do not know of such things; I am ashamed to use them."

High-tech neuroscience can today validate what ancient traditions have empirically known for millenaries. "We are discovering the scientific basis of what we have known before and have forgotten, to our great loss."¹⁸ 'Self-directed neuroplasticity' is now the term coined to describe the phenomenon that focused mind training can systematically alter neural circuitry for a therapeutic goal. While the Newtonian view of neuroscience hypothesized that *all causal connections are explainable in terms of mechanical interactions between material realities*²² (Beauregard), the Quantum perspective reverses such assumption, re-introducing the role of immaterial intentions as governing agent of the brain's physiology. Studies by psychiatrist J.Schwartz in the treatment of obsessive compulsive disorders demonstrated that serotonin levels –neurotransmitter for mood regulation- can be shaped at will through deep meditation practices, as can brainwaves electrical activity recorded through EEGs (see Chapter 6); which scientifically validates and opens a radically

new door for scientific/spiritual therapies.

It is now a commonly established neuro-physiological evidence that impulsive, hostile and depressed behaviors –potentially characteristics of addicts- are correlated with a neuroendocrine homeostatic imbalance: frequent lower serotonin and endorphin activity and elevated cortisol levels –the stress hormone- have been linked to such personalities in several studies (Walton & Levitsky).

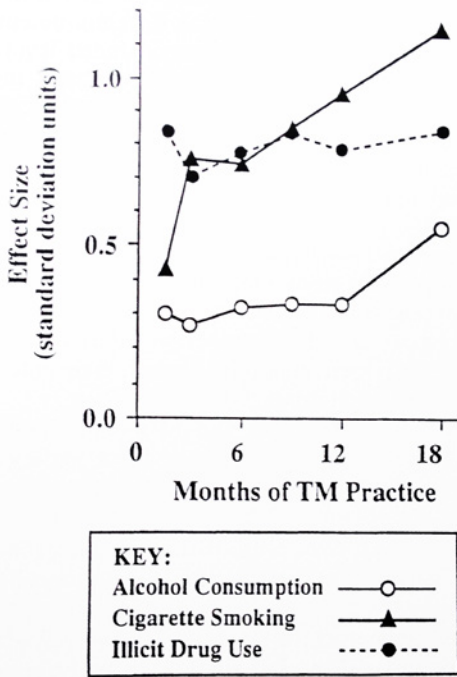
Through deep relaxation and quieting of mental activity the practice of Transcendental Meditation- TM, an ancient mental healing technique tradition from the Vedic tradition of India initiated by Maharishi Mahesh Yogi- thus introduces new forms of therapy where patients becomes able to naturally increase and strengthen their serotonin activity in sovereign noopolitical independence, hence free from the mercy of chemical biopower. But if such physiological measurements still demands wider recognition, its socio/psychological benefits have been scientifically verified many years ago:

In 1994 psychologist Charles Alexander -director of the division of crime prevention, rehabilitation and drug abuse in the Institute of Science, Technology and Public Policy at Harvard University- published with psychologist David F O'Connell and Harvard quantum physicist John Hagelin the results of dozens of statistical meta-analysis of the effectiveness of TM on healing addictions²³.

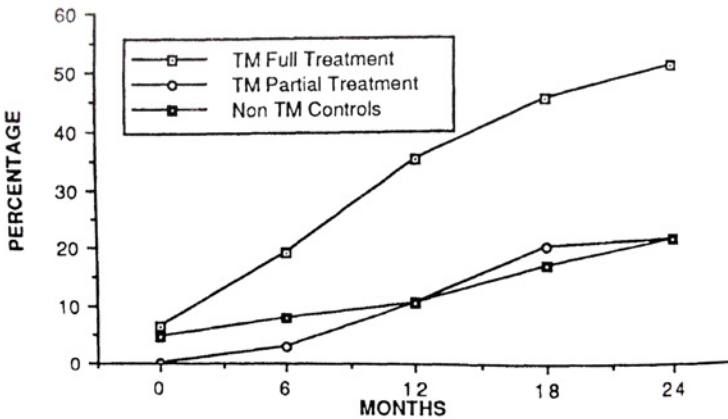
A study with a total of 2,500 students that learned TM showed a 75%-90% reduction of illegal drugs use in a period of 20 months of practice. Another study that followed 115 students who attended an out-patient drug rehabilitation program in Germany showed significant positive change in drug behavior after learning the TM technique: 51 % quitted after 4 months, 89% after 18 months. Another study followed 324 smoking adults for 18 months after being introduced to a TM program. Out of the 110 that started a daily practice, 51 % quitted and 81% quitted or decreased tobacco consumption.

Two studies comparing the effectiveness of various techniques –TM, relaxation programs, preventive programs, pharmacological treatments and other conventional programs- on alcohol and smoking cessation found TM consequently higher than the other techniques.

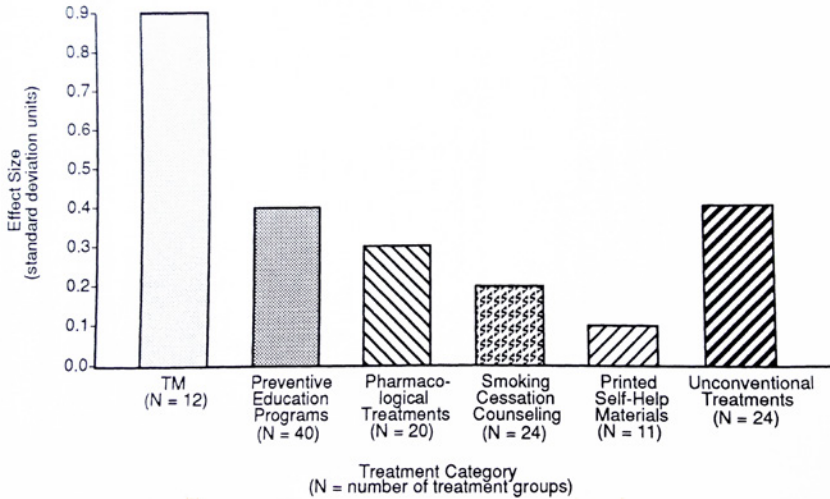
On a larger scope, research on collective consciousness –the Maharishi effect- initiated by the Maharishi International University in Iowa tested how the practice of transcendental meditation could be beneficial for the well being of cities at large. Using FBI datas the research compared up to 24 American cities where 1% of the population learned the TM technique from 1967 to 1977: all cities found a consequent decrease in crime rates across those years, demonstrating the potential of TM to reduce the drug/crime epidemic, research further extended to 160 cities and showed constant similar positive results.



Magnitude of TM on reducing alcohol, cigarettes and illicit drugs use (Hunt et al, 1971 Clinical Psychology)

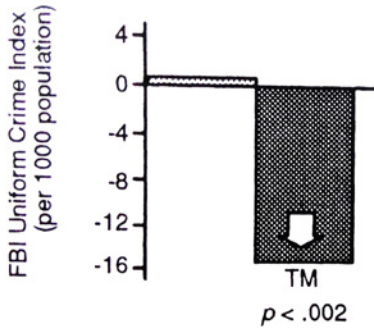


Magnitude of TM on reducing cigarettes use (*Self-Recovery: treating addictions using Transcendental Meditation*, D. O'Connell and Charles N. Alexander)

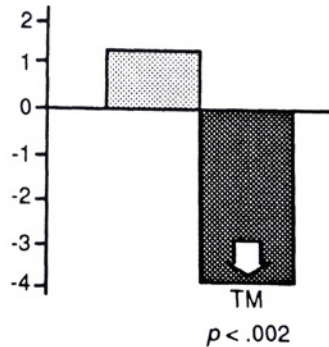


Maharishi Effect: Increased Positivity, Decreased Crime THROUGH TRANSCENDENTAL MEDITATION

Immediate Crime Rate Change in 1973



Change in Crime Rate Trend From 1967-1972 to 1972-1977



- Control Cities
- Cities with 1% practitioners

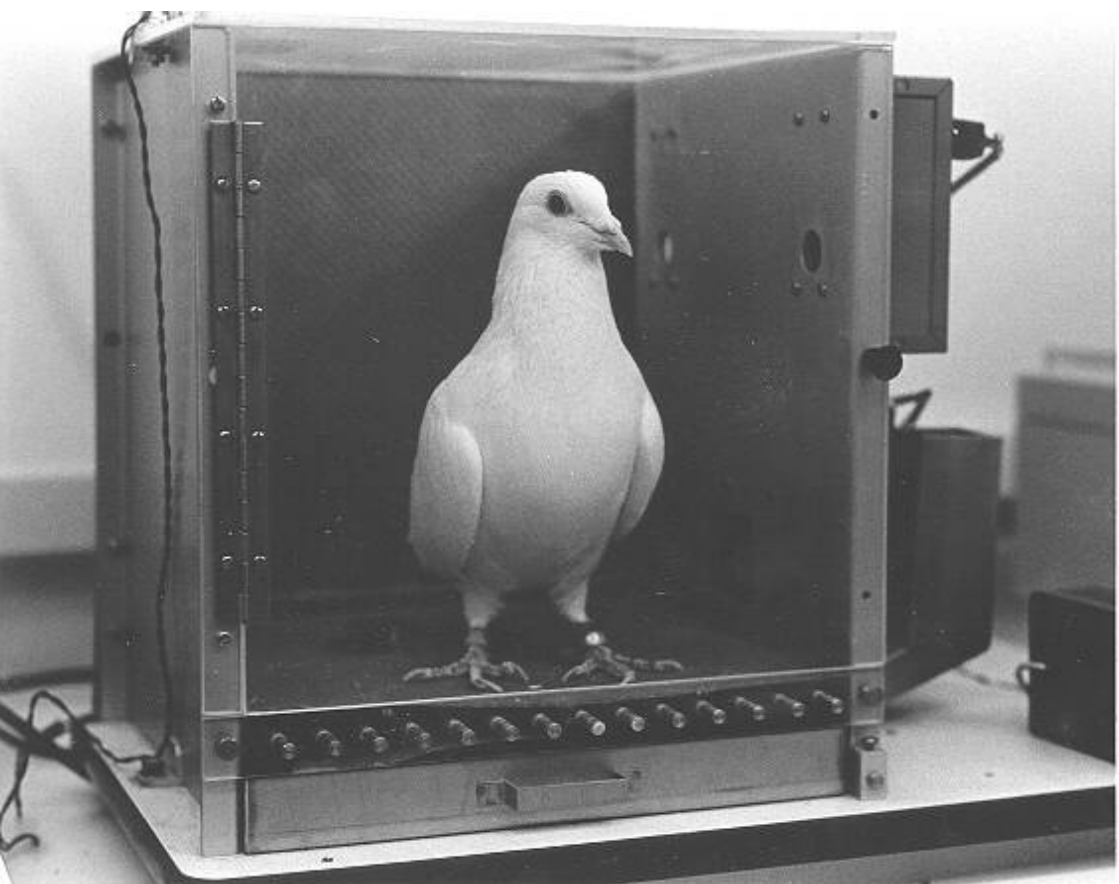
Comparative studies of effect size for reducing cigarettes use (top) and Crime Rate Reduction (bottom)

(Self-Recovery : treating addictions using Transcendental Meditation, D. O'Connell and Charles N. Alexander)

On an even wider scale and different aim, anthropologist Erika Bourguignon²⁴ conducted in 1968 a study on the use of altered-states of consciousness –trance and meditations- over 488 societies in all parts of the world at distinct levels of technological complexity: she found that 90 % made use of altered-states to emphasize connections within the social group. According to her we should rather wonder what happen to the 10% that don't use them and constitute the historical abnormality to be explained rather than the western opposite perspective. An argument confirmed by Physicist and anthropologist Arthur Kleinman, linking the vehement denial and fear of these therapeutic states of consciousness to the root of the West pathology: dissociating the ego that wants from the mind that transcends would have abstract the self from its bio-psycho-social unity and rendered Western man so susceptible to narcissistic disorders such as the individual accumulation of wealth, glory and power, unclassified in medical textbooks yet at the root of the current biopolitical madness.

Thousands more studies across mind&body medical institutions worldwide have shown similar positive results in long-term practiced meditation complementary with hypnosis and cognitive & behavioral treatments to heal addictions, such than an exhaustive list won't fit in the limitations of this essay. But successful rates remain highly dependent on the participants' expectations and motivations towards their therapy, and surely a small part on the scientists' own expectations towards the results. The subjective force of the will stays predominant and it is doubtful that meditation alone revitalizes the despair of addicts that have lost every social ties, moral dignity and interest for life if a decent supportive –social & economical- perspective is not provided in addition.

Chapters 4 & 6 will investigate how both natural pharmacological agents –entheogens- and spatial conditions –REST therapy- can help to reach therapeutic transcendental states with radically few mental will.



3 OUT OF SKINNER'S CAGE

From Behaviorism to Ecological Affordances

If the scope of the drug problem undoubtedly takes its root in a materialist and reductionist view of both physical and biological realities, the full biopolitical exercise of consciousness denial could only be completed with their third dictatorial friend in the field of psychology. Led by their hero B.F. Skinner, the school of thought of behaviorism gained unanimous success in the 1950s on the solidly stated assumption that subjective mental states could not serve as a rational basis for the scientific study of human conducts. "Give me a child and I'll shape him into anything" remains Skinner's most famous quote: a ideology where all that matters is who's in control, what are the conditions of control and what behaviors to be obtained. Understanding the inner need of who is controlled was not a question worthy of interests for behaviorists, and while Descartes dissociated body and mind Skinner and its puppets dissociated masters from slaves in the practise of therapeutic rehabilitation and maintenance of social order.

Economists saw in behaviorism the perfect theoretical guidelines to definitively get rid of the subjective inconveniences of traditions that standardized means of capitalist production had already practically annihilated. God suddenly rendered irrational, financial wealth hence appeared the only criteria to establish scientific behaviorist control to measure individual happiness. A psycho-economical politic architects were about to play a great role into: Neuroscience is the new fashion, and any designer interested in brain perception today will build a prosperous career in retail design. Shorter wave length colours such as blue and violet seems to stimulate shopping behaviour more than longer wave lengths colours like orange and red; Architects will learn all sorts of small tricks to activate the brain's dopamine rewards pathways of shoppers through the pillar of behaviourist psychology method, the Pavlovian classical conditioning. If the dog learns to associate the ring of a bell with a craving for food, he will immediately salivate when the bell rings. If shoppers learn to associate the colour or sound of a product with a shoot of dopamine in their brain in a hungry-like mood, he should theoretically automatically spend his money when he faces the same colour, or sound, in the shop. That is the essence of publicity and marketing, the spinal chord of the modern "liberated" societies in which we live: a science that explains how to treat citizens like dogs that is taught in the highest economical and cognitive institutions of our states. An understanding of the brain as a mathematically controlled cash-machine with its spatial politics of hyper-consumerism modern man know too well: Huge departure halls without comfortable alcoves to spend hours in transit wondering what channel perfume will best improve the airport income, night clubs with nowhere to sit unless with a one hundred euros champagne bottle, cold clinics and psychiatrists office better suited for 15 minutes of pornographic ecstasy in prescription pill rather than domestic environments of care , supermarkets of junk happiness

in a world where time is money. A world with its ghettos where neighbours are feared as potential threats and belief in collective trust lost in the vague memory of a pre-industrial age, a new world of reason the Moderns scientifically promised therapeutic. "Professing to be humane, modern architecture displayed a wholly unacceptable and sterile scientific rigour²⁵", noted Colin Rowe. We may now resolve by Science issues raised in spite of Science, elaborating a rational critique of the consequences of flawed rationality -urban, behaviorist or pharmacological.

"To know the true nature of a society, it is not enough to point to its achievements, as leaders do. We also need to look at its shortcomings. What do we see, then, when we look at the drug ghetto of Vancouver's Downtown Eastside and similar enclaves in other urban centers? We see the dirty underside of our economic and social culture, the reverse of an image we would like to cherish of a humane, prosperous and egalitarian society. We see our failure to honour family and community life or to protect children; we see our refusal to grant justice to native people, and we see our vindictiveness towards those who have already suffered more than most of us can imagine. Rather than lifting our eyes to the dark mirror held in front of us, we shut them to avoid the unsavoury image we see reflected there⁷."

As seductive Skinner and its followers' plans might have been, long ago would our modern cities be emptied from depression, addicts and criminals if their method had ever been successful. "Open a school, you will close a jail!", advocated Victor Hugo a century and a half ago, may the twenty-first century hear such wiser idea. Instead of school of behaviorism lets us build new schools for the mind, rehabilitation homes where addicts can escape the distress of their social reality and reclaim their mental sovereignty in therapeutical communities. Introduced by psychoanalysts in the 1950s in response to the failures of psychiatry and behaviorism that saw addicts as psychopathic urban animals to be captured and incarcerated, a therapeutic community would provide what psychologist James Gibson coined ecological affordances.

In such communities, or small societies within society, the biopsychosocial field would continuously shape noo-medical plasticity, affording a network of attachment relationship and a sense of responsibility to regain self-esteem and the love they've been deprived from childhood. If the key to recovery from addiction might be into re-considering the value of meditative hedonism, re-discovering the love and dedication to work through a sense of usefulness is undoubtedly its complementary opposite. Alcoholics would brew their own beer, control their chemical compound conscious of the mass-industrial processes that have damaged their brain, and enjoy their taste sip by sip in transcendental gastronomic session, live music would be played and taught, perspectives for education and jobs offered, massages freely delivered by the addicts themselves after learning the secrets of the best Ayurvedic techniques: Convivial fortress protected from the soldiers of biopower by walls of kindness and mutual help.

4 NATURE AS THERAPY

Essence and Substance



“Medical aggressiveness reflects an American character that has often been attributed to the effect the vast frontier had on the people who came to settle it. The once seemingly limitless lands gave rise to a spirit that anything was possible if only the natural environment, with its extremes of weather, poisonous flora and fauna, and the sometimes unfriendly native Americans, could be conquered.

(...) Scorning the healing power of nature, the Anglo-American doctors gathered their purges and emetics, couched their lancets, and charged the enemy, prepared to bleed, purge and vomit until the disease was conquered.”

Lynn Payer, *Medicine & Culture*

Synonym for evil in the middle ages, the Enlightenment era rediscovered nature as a basis for social survival; “The other word for Health”, in Thoreau’s famous aphorism. The Romantics feared our loss of connection to nature as much as ancient shamanic traditions feared the anger of Gods if Gaia was to be disrespected, and facing today the suburbs of our industrialized world and their noisy hospitals, they would remind us that they had good reasons to worry.

Essential Nature

The modern mistrust of nature in therapy, while undoubtedly strongly imbedded within Anglo-American medical beliefs than anywhere else, remains among the biggest topic of divergence between medical spaces and spaces of well-being. While maintaining the harmony with Nature stands as the leitmotiv of cures in spa, distancing from it imposed the necessary condition for which the rational paradigm of conventional medicine could rise. Nature was to be conquered, surrendered to the realm of predictable behaviorist statistics. Temperature extremes, bacteria, diseases, all issues to be blamed on Nature’s fault for which technological manipulation could provide a rational solution. But would we have confused rationality with technology?

Shifting away the hospital design attention away from the therapeutical values of nature, the garden, firmly rooted in ancient healing tradition, was lost. However a growing awareness within healthcare practitioners is now re-evaluating the consequences of such excessive ideology.

Epitomizing the Essentialist idea of nature, the phenomenological study of Roger Ulrich stands as a pioneering example. Gathering records of patients viewing a brick wall or a view of tree, Ulrich proved what romantic artist and philosophers had in mind centuries earlier: Nature heals. Hospitals patients facing trees required fewer doses of narcotic pain drugs and registered shorter lengths stays than patients facing a brick of wall.

Essentialist nature is indeed closely related to our stress coping mechanisms, firmly rooted in our biological inner capacity to foster emotional wellbeing through relieve and escape from threatening situations. The question however remain: how could the Evidence-Based-Design community praise for no-drug objectives facing the biopolitical oligarchy of contemporary cow-boys compulsively hunting for the last remaining native Indian mouth to fill with Methadone?

Substantial Nature: Popper, Iboga, Ayahuasca

“Plants do not make judgments. They are not interested in who you are, what you are, or what you have done.” Bibby More

Transforming natural substances in archetypes of fear, modern medicine has betrayed his closest allies and forgot the immense debt it owes them.

Indeed the respect ancient and pre-modern civilizations owed to the authority of the doctor was mainly due to his ability to master the poppy plant, from which all opiates -morphine, codeine, opium and heroin- are derived. With humour, French botanist and pharmacologist Jean-Marie Pelt affirms that if all plants would gather to elect their Nobel Prize, pope or president, they would certainly choose poppy. In his eyes it is the king of all, the only one that is not interchangeable with any other plant or synthesized substitute, the one humanity had been dependent most to heal the unfortunates, may they be the burnt soldiers of Nero two thousands years ago or today's terminal cancers patients. If corn or potato can replace wheat, nothing replaces morphine today to relieve pain. Obviously opiates demands high precautions and conditions of use, as doctors always knew since antiquity. But from controlling their dangers through accompanied care we have created ourselves a world of globalized poverty and Mafia violence. God Bless America. But if the “new world” may be the cause of most drugs problems, that same continent may as well save us from our sins.

Anthropologists, ethno-botanists and other curious minds have been for decades fascinated by the spectacle of traditional healing rituals of native-American tribes. Ayahuasca -or ‘yagé’-, a brew made from the extract of the leaves of dimethyltryptamine -DMT- occupies a major role in the Amazonian shamanic traditions, while the African have the Iboga plant growing in Cameroun, Gabon and Congo, its roots considered sacred in the Bwiti religion.

Among the most powerful entheogen, Ayahuasca was first academically described by Harvard ethno-botanist Richard Evans Schultes in the 1950s, before being studied by many eminent academic minds, among which American psychiatrist Dr. Rick Strassman and Israelian psychologist Benny Shanon.

The efficacy of Iboga and Ayahuasca in treating Alcohol and Heroin dependency is dramatically underestimated, if not completely ignored -as entheogens are associated in most western countries to dangerous drugs with no therapeutical benefits rather than seen as potentially helpful. Previous Heroin addict Howard Lotsof, discover of Ibogaïne's anti-addictive effect after a series of clinical tests in the treatment of addiction orchestrated by Harvard psychologist Timothy Leary, describes his awakening after his Iboga experience as such:

“For the first time since months I did not feel the envy neither the need to take Heroin. In fact, I saw Heroin as a drug which only rhymed with death, and I wanted life.

I looked at this large tree in front of me and I looked at the clouds in the sky and I realized that for the first time in my life I was not frightened, and perceived that my entire life had been full of fear."

"I don't know if you have knowledge on heroin dependency, but among the five out of seven for which the treatment worked, one was leaving with the two others that failed the treatment. He lived there with these two guys for six months, while they were injecting it every day, when he stayed clean. So, if you know about heroin dependency, you know how hard it is. So we knew we had there something unique."

Among many of its neurobiological effects yet under-studied, its most important may be its selective antagonist action on NMDA receptors, the predominant molecular device controlling synaptic plasticity and memory function, which psychiatrists have shown linked to drug dependency (Chambon). "Facts suggests that ibogaine treatment provoke a resetting or normalization of neuronal adaptations underlying dependency. (...) A great number of those that have tried their drug again after treatment notes that it doesn't act as before: effects are deceptive, or they have less taste, as if they had unlearned their addiction. The action of Ibogaïne on areas hypothesized to be implied in memory, learning and conditioned reflex -cerebral amygdala, hippocampus and frontal cortex- could explain such unlearning⁵".

Kenneth Alper, psychiatric from New York City school of medicine comments the results of a study on 33 heroin and methadone addicts in 1995 ²⁶:

Ibogaine is of interest because it appears to have a novel mechanism of action distinct from other existing pharmacotherapeutic approaches to addiction, and it potentially could provide a paradigm for understanding the neurobiology of addiction and the development of new treatments. (...)

The subjects in this series of cases reported an average daily use of heroin of 0.64 ± 0.50 g, primarily by the intravenous route, and received an average dose of ibogaine of 19.3 ± 6.9 mg/kg (range of 6 to 29 mg/kg). Resolution of the signs of opioid withdrawal without further drug seeking behavior was observed in 25 patients. Other outcomes included drug seeking behavior without withdrawal signs (four patients), drug abstinence with attenuated withdrawal signs (two patients), drug seeking behavior with continued withdrawal signs (one patient), and one fatality, possibly involving surreptitious heroin use (see Section VI, "Safety"). The reported effectiveness of ibogaine in this series suggests the need for a systematic investigation in a conventional clinical research setting.



If many more studies have now come to similar conclusions, addiction care is not the only medical field in which such plants can be successful.

Dr Eduardo Schenberg from the university of Sao Paulo published recently a study detailing the potentials of Ayahuasca in cancer treatments ²⁷:

“There is enough available evidence that Ayahuasca’s active principles, especially DMT and harmine, have positive effects in some cell cultures used to study cancer, and in biochemical processes important in cancer treatment, both in vitro and in vivo,” and “Therefore, the few available reports of people benefiting from Ayahuasca in their cancer treatment experiences should be taken seriously, and the hypothesis presented here, fully testable by rigorous scientific experimentation, helps to understand the available cases and pave the way for new experiments.”

“In summary, it is hypothesized that the combined actions of β -carbolines and DMT present in Ayahuasca may diminish tumor blood supply, activate apoptotic pathways, diminish cell proliferation, and change the energetic metabolic imbalance of cancer cells, which is known as the Warburg effect.” (...) “Therefore, Ayahuasca may act on cancer hallmarks such as angiogenesis, apoptosis, and cell metabolism.”

“If Ayahuasca is scientifically proven to have the healing potentials long recorded by anthropologists, explorers, and ethnobotanists, outlawing Ayahuasca or its medical use and denying people adequate access to its curative effects could be perceived as an infringement on human rights, a serious issue that demands careful and thorough discussion.”

No risk toxicity neither addictive potential have been found in Iboga and Ayahuasca, yet their savage use without traditional healer or shamanic guidance is highly dis-recommended. Mixed with alcohol or Heroin can lead to death –even taken hours before treatment- as can be the case for patients with weak heart conditions.

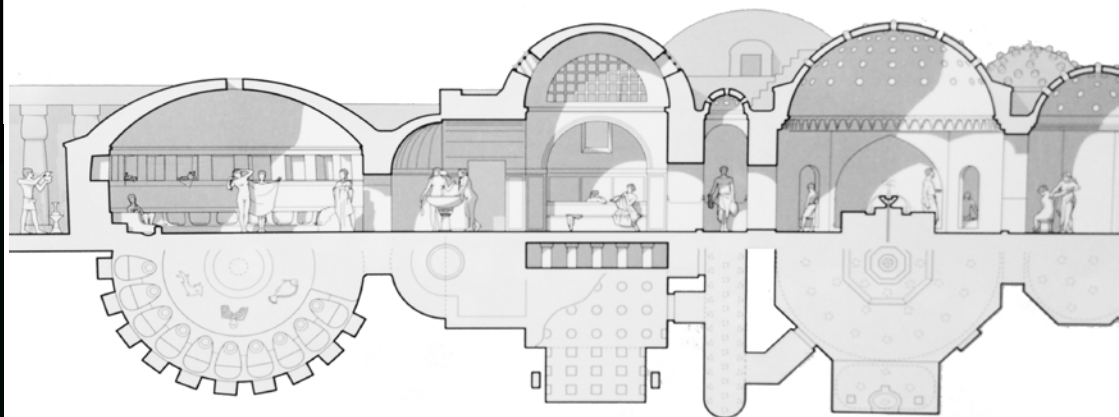
The American National Institute on Drug Abuse –NIDA- and The Food and Drug Administration –FDA- have now approved the studies of Iboga on both in rats and humans, and the first conventional trials are finally being set up in Arnhem in the Netherlands, even though already in place worldwide in traditional settings. Despite the inertia of our bureaucracies, politicians will wake up, there is no other way, and I have not one doubt conventional practices will evolve in the following years.

However their ancestral healing potentials are hardly dissociable from its spiritual, sacred or festive African or Amazonian contexts, quite alien with modern clinical settings. An issue left out for architects of noo-medicine to solve...

5 SPACES OF HEALING & SPIRITUALITY

Churches, Temples, Domes & Ancient Baths





The ancient Mediterranean world did not have the hospitals of hygienic sterility we inherit today. Before the advance of germ and genetic theories, the Greeks considered the soul as the first element of attention: the ill were treated either at home through itinerant doctors or taken away in temples dedicated to Asclepius, the God of Healing. Idyllic places facing lakes and seas, away from the dust of towns where patients could enjoy music, natural diet, prayer, sleep and dreams. And in most part of the world before the radical divorce of church and state following from the second industrial revolution, the whole concept of healing could not be thinkable without compassion and spiritual means. With their vast hallways and smaller alcoves devoted to prayer, hospitals used to represent this ideal, this medical intuition that both our inner feelings and their spatial contexts might matter much in a recovery process. Religious architectures were in this sense extensions of the architecture of our souls. Islands of peace and silence in which such an odd idea as the existence of saints and divinities becomes almost conceivable, witness of a time when the greatest architects did not pretend to be Gods but rather testify its presence in words of bricks and stones. A time when selfishness was not yet taught in business schools but contained in a collective will, when ego was not a mean to personal success but shared under the presence of a holy spirit, at the infortune of those which denied its existence.

Philosopher Alain de Botton argues that our museums have become our new churches, taking responsibility for the cultural teaching theology could no longer provide. But we can argue for the opposite: our churches have now become our new museums. In the historical city of Delft as in many other European cultural heritage threatened by private property development, Cartesian atheists that many of us are have to pay our tickets to contemplate their magnificence as cau-

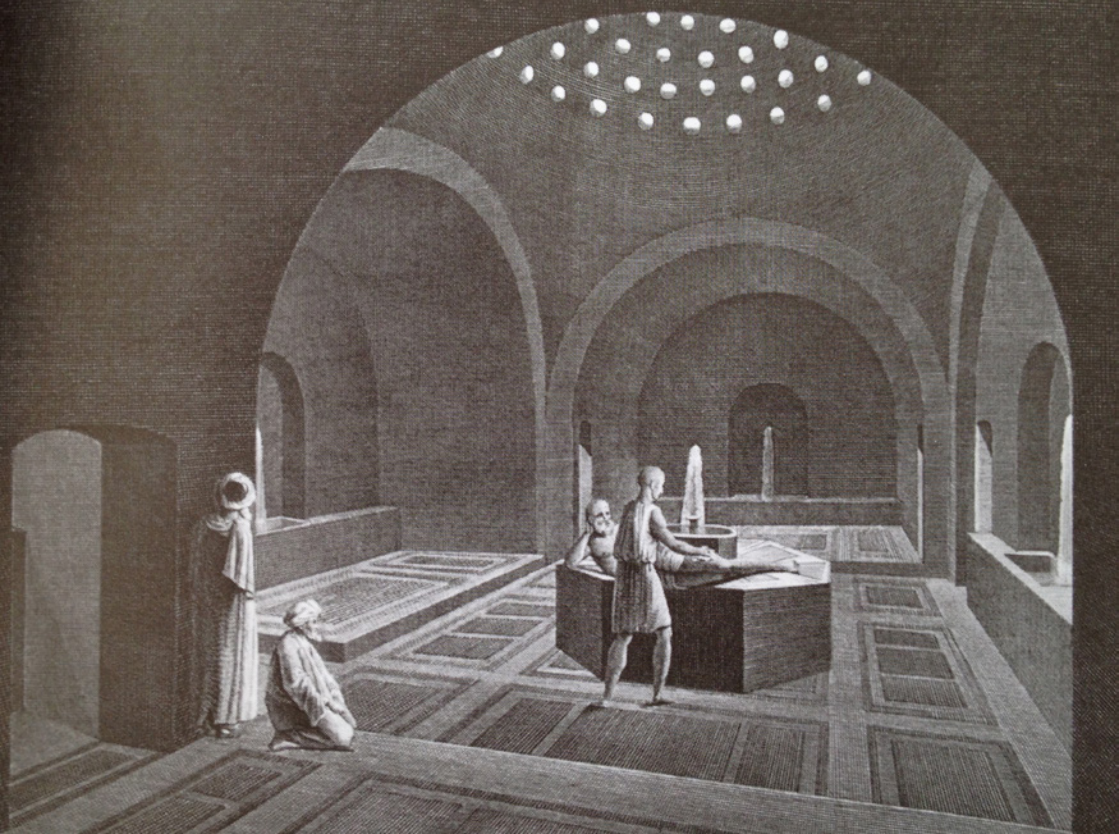
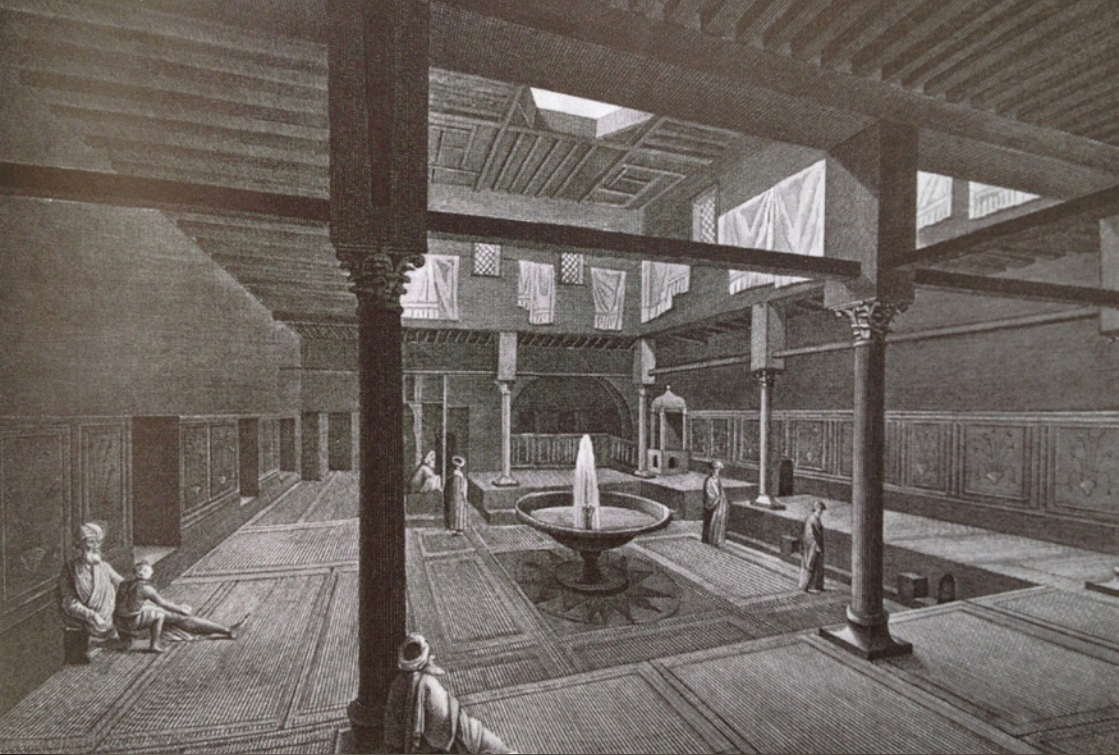
tious and distant observers, cautious that a deeper transcendental drive don't alter our individual integrity. But their beauty should be seen as the representation of the beauty of the hearts of those that ordered their construction, along with homes of charity where any poor man on earth could feel at home. Today few would contradict the fact that the modern mega-machine hospital seem to have divorced from its original semantic meaning of hospitality.

But entering a Christian church, a Jewish synagogue or a Muslim mosque today we may feel a bit confused while interpreting its semiotic. We wonder whether the crucified Christ wants to tell us about eternal love and forgiveness or remind us about the murders of indigenous slaves overseas and the continuous stigmatization of homosexuals in his name, whether long beards and small round hat evoke the joy of a festive Jewish community or the continuous threat on Palestinian enemies, and muezzin' chants a sweet devotion toward divine kindness or the rage of Muslim extremists.

Yet if there are still places on earth where atheists can hardly resist the temptation of extending the boundaries of their ego toward spiritual enlightenment, it has to be the traditional spas of the Middle East. The naked back on the meditation stone under the pierced vaults of the Cemberlitas hammam of Istanbul, heat and steam altering precise perception of reality, the reality landing from heaven on earth to the busy street outside is not just a small shock.

But beyond divine devotion, the baths were spaces of social encounters, mysteries and gossips. Collective nudity imposed its humane moral: transparency with the self, honesty to others. We abandoned our private shields and daily mascarades to face the true reality of our human bodies offered to a shared vigilance. The other becomes no more a threat but a potential friend, as starting a random conversation with a stranger cease from being a foolish idea. Food, water and soap healed the Greeks bodies, silence healed their minds and meditation emptied it from the superfluous. Before we considered the private bathtub as a standard of modern comfort, before we had churches for prayer, café for encounters and couches for psychoanalysis, Mediterranean traditions were satisfying all these needs at once.

Ancient Bath's architecture consisted of sequences of rooms; often circulars, high stone vaults or intimate alcoves. Circularity was the support for collectivity: an indivisible shape gathering every point of view in one focal point, in one shared agreement. Heat was delivered from one central room to steam conducts and holes in the ground and walls, from cold to hot: The apodyterium was the largest room where the Greeks undressed and relaxed ; the frigidarium, the cold bath ; the tepidarium as intermediary; the laconicum, to sweat and lay down before the caldarium, humid and burning.



In a time of another financial collapse and new ecological crisis, we might today feel a bit nostalgic towards such successful ideals of democracy. High-speed capitalism has now emptied Cairo and Athens from their ancient bathing culture, and to live in a Spa everyday like our ancestors did, one must be seriously rich. The day when neuroscience will definitely end to prove that much less could be spent in chemical speculation and much more in healing environments, will Big Pharma offer us back our collective baths?

6 SENSORY DEPRIVATION TANKS

Float or Restricted Environmental Stimuli Therapy -REST



"If the nineteenth century was the age of the editorial chair, ours is the century of the psychiatrist's couch."

Marshall McLuhan, Understanding Media

Could the twenty first century be the one of the sensory deprivation tank?

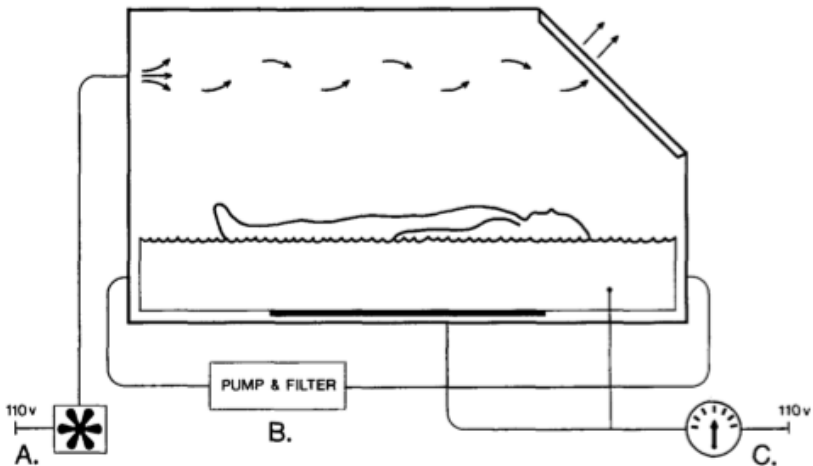
Neuro-immunologist Esther Sternberg has few doubts that the revolution neuroscience is undertaking on understanding stress do to our present century hospitals what the advance of germ theories did to the twentieth century hospitals. Her book healing spaces²⁸ lacks only one discovery: Neuropsychiatrist and physician Dr. John C. Lilly 's invention.

Throughout his understanding of sleep patterns and mental health Lilly wondered how would the brain's activity look like on conditions isolated from any form of

external stimulation -light, sound, noise, temperature and gravity.

In the early 1950s he borrowed a soundproof water container the Navy built to study the metabolism of underwater swimmers, which he later transformed into a simpler closed box where the first experimenter –himself- floated in a solution of Epsom salt heated to body temperature, his skull wired to electrical sensors. Since then the technique has been perfected, and studied in depth under a new name: REST for Restricted Environmental Stimuli Therapy, as Sensory Deprivation mislead to analogies with some form of North Korean torture or brainwashing technique. But Lilly’s conclusions were far away from his colleague’s disbeliefs: Floating in the tank could be superior to a night of sleep to recover from stress and fatigue; and the deep states of relaxation it provided could heal body pain, psychological pain, addictive drives, enhance learning processes while awakening towards transcendental mind states.

“It turns out that the tank and its isolated environment do for one what one must do inside one’s own mind-body when meditating in the usual environment”; “When given freedom from external sources the isolated-constrained ego has sources of new information from within.”²⁹



Michael Hutchinson's Book of floating³⁰ reports the life stories of four people now addicted to the tank:

Paul started floating after fracturing his shoulder in a ski accident. "I went into the tank with this excruciating pain, and when I came out the pain was gone. I slept that night without any drugs for the first time in weeks! And the next day at work my head was not only clear, I even felt more bouncy and mentally sharp than I ever did before I broke my shoulder."

Fashion model Chris was raped in her late twenties, and the scars slashed on her skin were small in comparison to the deeper psychological pain she underwent. Emotionally traumatized, suffering from severe anxiety and chronic panic attacks, she could never enjoy sex again. She just wanted to stay "numb and dumb" on marijuana. Floating helped her recover towards happiness and self-confidence, by mentally visualizing the scene again and again until she could defeat it. "It was like a ghost, always there, ready to come out and spook me at any time. But now, since I've replayed and revisualized the scene, it's like I've seen through the ghost, and it can't haunt me anymore."

Arthur, a psychologist with a Phd and years of research on EEG and sleep patterns, came to the tank driven from simple scientific curiosity:

"After about half an hour I began to start thinking about some areas of conflict in the relationship I have with the woman I'm in love with. And as time went on, the areas of conflict seemed to melt away and a sense of harmony took their place. I started to feel as if all problems could be resolved, as if the sense of underlying goodwill between me and this woman could overcome everything. (...) Ultimately it was a type of religious experience. I'm not religious, but if I were religious this would be a type of religious experience, a religious revelation: a sense of harmony between me and all other people, (...) an idea that kept coming back to me on frequent occasions. (...) I would say it's because I was communicating with myself in the tank in a way I never did before. It was a unique experience, essentially not comparable to anything else. It's impossible to imagine what a sexual experience is like until you've experienced it –same thing with a float. Also in a way it had the same euphoric effect on me that sex does –of feeling a deep sense of harmony with the world, a sense of peacefulness and contentment."

Michael Hutchinson's own discovery of the tank is not just a small miracle.

An evening running across the Santa Fe River on a heavy snowing day, he slipped over the bridge, his neck falling against a sharp rock. Instant paralysis: his head out supported by the rock, the body immersed in the cold river. "I felt the icy water sucking the heat of my body and it occurred to me that I was going to die. (...) At one point I found myself dreaming I was lying in my bed with a river flowing through it and I thought how cold it was and that I should get out of bed but I couldn't seem

to move. (...) So this is what it is like to die. I had a feeling that it wasn't bad, in fact I felt very cosy and comfortable, and I realized after I died I would pass into this emptiness into which I was already sinking. So I passed out and as far as I knew I died." Waking up face down on an operating table, the neurosurgeon informed him he had five smashed vertebrae and would probably never recover from the paralysis of his neck. After a series of pneumonias that almost cost him his life and successions of mystical near-deaths experiences, he survived, but his thin hopes in true recovery eroded day by day. The pessimism of doctors entrenched his depression even more, but he refused to give up wondering what was the meaning of these near-deaths revelations. "Maybe, I thought, it was a sign I was gripping onto my life to tightly –that my ego was struggling too hard to be in control- and it was time to let go, let go of my life and let go of my attempts to control my life." He started the practice of meditation in order to empty his mind, and later discovered the tank. "No more words, no more thoughts, no more images, no more mind", he told himself falling in a "waking dreamless sleep". After thousands of hours of float he awakened away from depression and recovered from paralysis in a year. "My main doctor even took to calling me The Miracle Man".

Obviously in a biopolitical paradigm where the power of the mind over the body is still partly denied, such exceptional stories as these four could only be left out in the scientific bin of unexplainable 'miracles'.

Yet the essence of this miracles is today scientifically accessible.

Gravity

It is estimated that 90 percent of the nervous system's activity is occupied in maintaining balance with the ground. All stimuli affecting the brain's muscular activity are constantly primarily affected by gravity: "all our perceptions and sensations take place against this background of muscular activity, and gravity therefore decreases our sensitivity to and awareness of the external and internal reality."

To liberate the brain from gravity is to liberate most of his energy away from its heavy relation to earth towards his inner mental processes: the perception of the smallest sensations is thus intensified. By alleviating the gravitational pressure on the whole body –brain, muscles, bones and nerves- blood pressure drastically declines:

"The release from gravity also allows the blood to circulate more freely and completely, reaching parts of the body that may be unhealthy because of cardiovascular constriction (caused by smoking, cholesterol clogging and tension), and in the process allowing the heart to operate more efficiently with less effort. It's likely that Paul experienced relief from the pain of his broken shoulder because of the tank's anti-gravity effect. Not only did floating eliminated the downward pull on the shattered bone, but by alleviating the tension in the rest of his body it probably

increased the flow of biochemical that could promote the rapid healing noted by his doctor.”

Metaphorically, the release from gravity allows ourselves to reach the realms of those ideal figures some pictured as angels or gods, figures floating above our poor grounds which divine affairs have little to do with the weight of our human imperfections but which transcendental domain materialistically heals our bodies and souls in the Tank. But those –like myself- still unsure about the existence of invisible spirits can simply look at neurobiology and EEG tracings.

Brain Waves

High-tech electroencephalography –EEG- can today records the brain’s electrical signals of energy, conventionally classified in five rhythmic patterns:



Gamma 30-100 Hz The hyperbrain activity, or rare ‘super-learning’ state



Beta 13-30 Hz: The waking rhythms. The brain is focusing on the world outside itself or dealing with concrete, specific problems.



Alpha 8-12 Hz: A regular sawtooth pattern, the brain is alert but unfocused. The body is relaxed and calm.



Theta 4-7 Hz Slower, powerful rhythmic when the brain sleeps from consciousness to unconsciousness, the state of dreams and imagination we encounter at least twice a day just before we fall asleep and just before we fully awaken. The state of hypnogagic trance, or lucid dreaming, hypnotic, unpredictable and mysterious scientists have difficulties to maintain as people tend to immediately fall asleep.



Delta 0.5-4 Hz The brain remains active, but consciousness is deeply asleep.

Childhood neurodevelopment starts from delta frequencies after birth to reach the theta state at the age of 2, produce alpha waves only after 6 years old, and more active consciousness beta waves from 10-11 years old.

From a quantum neuroplastic perspective (chapter 2), Biofeedback is the term coined by clinician to raise awareness of inner physiological functions in order to take conscious control over health and performance outcomes, somehow the contemporary scientific synonym for meditation. allowing personal changes in physiological activity through changes in thinking and emotions: electrical brain activity can be altered at will.

Studies by biofeedback expert Richie Davidson recording the EEG of Zen practices demonstrated that Buddhist Monks are able to generate Alpha waves consciously, while only the most skilled ones were able to produce long trains of theta waves. Subject in theta rhythms describes this state as experiencing “a new kind of body consciousness very much related to total well-being”, bringing “physical regeneration” and “manifested improved relationships with other people as well as greater tolerance, understanding and love of oneself and of one’s world”, as well as “new and valid ideas or syntheses of ideas, not primarily by deduction but springing by intuition from unconscious sources.”

But those that don’t have the patience to spend 20 years of practice in the Himalaya can simply enter a deprivation tank, which has been demonstrated to maintain the theta state for prolonged hours, with very few mental efforts from the floaters. To reach the Theta rhythmic is somehow a journey back to our early childhood: a state of mind deprived of our adult responsibilities of e-mails and paper works, stress and phone calls, daily worries, beyond the ego thus liberated from spatial and temporal constraints.

The Three Brains and Neuroendocrine Activity

Previous chief of Laboratory of Brain Evolution and Behaviour at the American National Institute of mental health Paul D. MacLean made considerable advances in neuro-scientific theories, matching three physiological levels of the brain with its evolutionary history:

The Neocortex –divided in Right & left hemispheres- , the last and more developed part of the brain that differentiate us most with other animal forms, where conscious cognition, memory, judgment and intellect take most part.

The Paleomammalian or Horse brain, also known as the limbic system that we share with all other mammals, where most of our vivid semi-conscious emotions take place: rage, panic, love, attachment, affection... The limbic system host the Hypothalamus-Pituitary-Adrenal axis, or the “brain’s brain” which regulate most of our emotions and desires. It is the main interface between the outside world and the rest of the body, where neurochemicals that triggers profound emotional

changes are released to allow or constraint healing processes.

The Reptilian or Crocodile brain, the older part we share with all reptiles and which governs the Reticular Activating System (RAS), the “alarm bell of the brain which determines our arousal level and our state of awareness and attention.” The reptilian brain controls most basic vital functions such as respiration, temperature and balance...

But to consider the three brains as distinct entities can only be a lure of representation our neocortex makes from information sources, splitting up ideas by carefully re-organizing knowledge in compartments: the three structures do not work independently from each other but complementary. Mclean argues that not only the brain lacks horizontal communication between the right and left hemispheres of the neocortex, it also lacks vertical communication between the three levels of brain evolution.

Deep relaxation through meditation and floating is hypothesized to restore communication between all levels of the brain, horizontally and vertically in a more harmonious balance. When external stimuli is low, the RAS intensifies the volume of all senses, leading to increased awareness and conscious control over all body functions we lack full grasp of -such as respiration and heartbeat- when the brain is focused on outer specific purpose. Being able to control more acutely the operation of the Paleomammalian limbic system, the neo-cortex learns to consciously de-activate neuroendocrinal secretion of plasma cortisol and potentially activate natural secretion of endorphins necessary for self-immune responses.

Such process can also be understood by what biologist Bruce Lipton called the ‘Growth /Protection’ mechanism, or the fundamental survival mechanisms of behaviour. The nervous system interprets signals from the environment and send potential threats towards the Hypothalamus-Pituitary-Adrenal axis which start releasing stress hormones. If activated the HPA enters in protection mode to mobilize the body’s energy to deal with the threat, thus inhibiting growth mechanisms and repressing the action of our immune system.

In permanent state of anxiety, addicts spend much of their time in protection mechanisms, which explains why in addition to their damaged dopaminergic and endorphinergic systems their weakened immune responses makes them more susceptible to other diseases, hence young collateral deaths. Self-recovery can then only begin in conditions where external discomfort is totally reduced for healing can burst from within, and it makes no doubt that the tank can provide such setting.

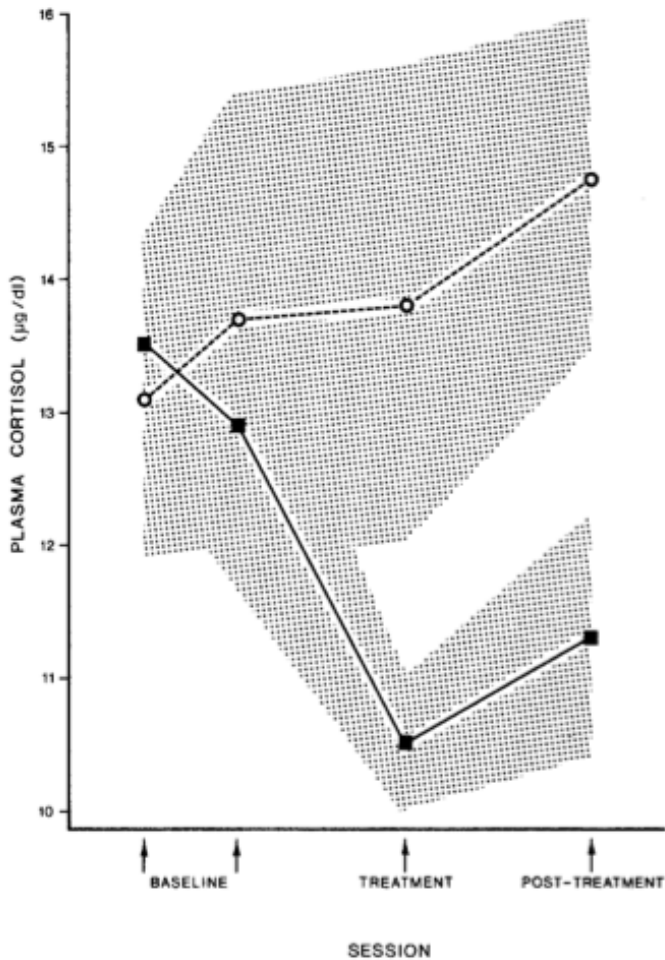


Fig. 2. Effect of repeated brief REST on plasma cortisol. Data represent pooled pre- and postsession values. Shaded areas are 95% confidence intervals. Values for REST treatment and REST follow-up were significantly different from all others ($p < .01$, multiple-range test). REST ■—■ ($N = 6$), non-REST ○—○ ($N = 6$).

To few statistical studies seems to have been done within conventional medical practice to help opiate and alcohol addicts kick out their habit without drugs, and extensive research on the potential of the tank to achieve such goals still deserve drastic development.

Yet several studies have already demonstrated its efficacy on tobacco smoking prevention. A parametric analysis by Peter Suedfeld³² compared three groups of heavy smokers from 19 to 70 years old in three different REST session. While floating the smokers were delivered audio messages informing about the dangers of tobacco at three different time intervals, in session of 12h, 24h, or five times an hour within 14 days (flotation):

Table 1. Smoking reduction and abstinence.

Treatment Condition	3-Month Follow-up		12-Month Follow-up	
	% Reduction	% Abstinent	% Reduction	% Abstinent
12-hour				
Massed	66*	43	49*	22
Distributed	31	38	19	18
Demand	40*	22	28*	11
None	55	29	18	10
24-hour				
Massed	64***	25	45*	27
Distributed	44**	64	51**	36
Demand	44**	17	23*	18
None	62**	40	45**	18
Flotation	13*	0	18	0

* $p < .05$. ** $p < .01$. *** $p < .001$.

Mean reduction across all groups was 51% at three months and 35% at 12; there were no significant differences as a function of session duration or message presentation schedule. Most treatments did result in significant reduction at both follow-ups. The two message conditions that were the most powerful using 24 hour of REST (distributed and no messages) had only nonsignificant effects in 12 hours. The 24-hour distributed message group had the highest rates of both reduction and abstinence. Flotation led to mean 13% and 18% reductions at 3 and 12 months respectively, with no subjects abstinent. (...)

Chamber REST has moved beyond the status of an experimental intervention for smoking. It is a robust and replicated procedure, which can be combined with more traditional treatments at little additional cost. Its use in other contexts, and the effective applications of flotation REST, warrant further investigation.

If REST therapy is surely least effective on smoking cessation than tsar Frédorovitch decapitations, there are chances that even if it does not prevent someone from smoking, a daily relief from stress restore homeostatic balance and re-regulate apoptosis to prevent the occurrence of lung cancers. A noo-medical hypothesis that still demand proof.

CONCLUSION

“Is there some ultimate cause of “disease” than that which we hope to find in the microscope tube? What if we should peer in the other direction through the microscope, letting it become a telescope presenting us with a holistic rather than an atomistic or particulate picture?

Now we have reversed our perspective on this problem of what get ourselves sick. The problem is how we get ourselves sick (actively), or allow ourselves to become sick (passively). To what extent is dis-ease a state of mind or a results of one’s attitude...a breach not in the defense of the body mechanism but beyond that some maladjustment in the relationship of ourselves to ourselves and to our environment? This is scarcely a new idea, but we Westerners have been slow to grasp it.”

Craig S. Enright

Biomedicine faces today a serious crisis. I hope this essay ended to demonstrate that we will never heal our crack, opiate and alcohol addicts if we don’t heal in the first place the deeper pathologies of our healthcare economical structures. In France 100 000 grave iatrogenic accidents and 20 000 death a year can be avoided, while our jails are striving. In his recently published *Guide of the 4000 useful, useless and dangerous medications*³³ Pr Even estimates that 40% of the drugs sold by the industry are inefficient, 22% bare risks and 5 % very high risk, which represents 10 to 15 billions that is wasted at the infortune of patients, hospital structures and public finances. The investment for each new drug cost the industry more than 3 billion, a sum only private companies get interests from that is not spent for research into non-toxic natural compounds which efficacy have thousands of years of empirical verification or for development of crime-prevention programs or education on consciousness & self-immunity.

Rather than informing the public about the noo-medical truths quantum science is today rediscovering, mass medias have preferred to strengthen our fears about threats to conquer in a war against behaviours and nature. Yet they are no more to blame than all of us are, as few dictators come into power without the support of its population. It is indeed easier to spend a few dollars on pills rather than hours of meditative training on ice-baths or in iboga sessions... The noopolical battle will have to be won upon ourselves first.

But what phrase can better resume the present drug dead-end that Sanche de Gramont definition of the Cartesian scientist: “It does not matter that his findings were inaccurate, as long the method was convincing... A general who devises a perfect plan with incomplete information about enemy capacity and goes into elegant defeat, is Cartesian.” Elegant defeat indeed for our politicians, that do not seem to

have studied science nor history. That will be our next duty if we wish to live in a world with less despair and criminality. The Dutch did not wait, but the international community have not learned yet from their empty jails. Who can honestly claim today that the current war on drugs addicts or cancer have ever been successful for any one else than its multi-billionaire investors? It might be time to sign the peace treaty and chose between the health of our citizens or our industries.

“All the energy modern medicine spend into looking for the cause of disease in Nature is an energy that is not spent into looking at its own suicidal behavior;” pointed stress pioneer Hans Selye³⁴. While the black plague deceived half of European population in the fourteenth century, the generalized impact of stress in our lives may well be the new evil curse humanity ought to struggle against. But in this war, force or technologies won't be of any help.

We won't get out of neoliberal economies so rapidly, and this essay don't have the pretention to affirm we ever will. However a neo-political shift could slowly merge the present materialist religion with the empirical wisdom of ancestral traditions the West have enslaved and denied for centuries in the name of their unquestionable scientific superiority.

As anthropologist Bertrand Hell warns, “no therapeutic system, as sophisticated and technically developed it might be, will exempt doctors of the perhaps desperate task to support distressed individuals in their anxious fight for a random recovery. In the light of the arrogant assurance of western thought towards the power of science and progress, we measure the path that is left to cover so that biomedicine accept to fully own this idea³⁵.”

If the Cartesian machine-age is about to die, from its ashes could rise a new era of quantum humane realites, so that *Homo Addictus Economicus* lead way to *Homo Demens*, the man that dreams. The hell-bound train of biocapitalism might have lead more unfortunates to their tragic fate than the one of Nazism, the challenge of the twenty first century will be to raise its alarm bell.

“Eternal Compassion, that is all. All the rest, too complicated.”

The Dalai Lama

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