

THE UNIVERSITY OF CALGARY

“Convergence”

A Written Accompaniment to the Thesis Exhibition

by

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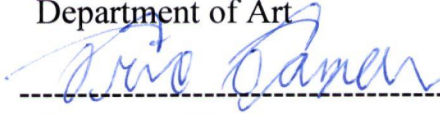
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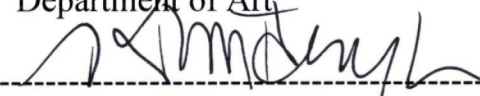
The undersigned certify that they have viewed and read, and recommend to the Faculty of Graduate Studies for acceptance, respectively, a Thesis Exhibition and a supporting paper entitled "Convergence": An accompaniment to the Thesis Exhibition, submitted by Daniel Wallace in partial fulfillment of the requirements for the degree of Master of Fine Arts.



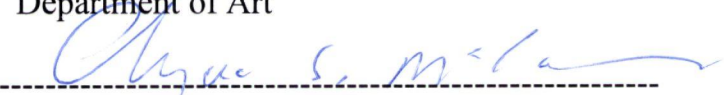
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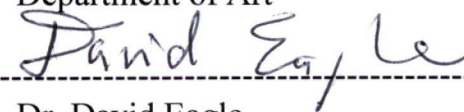
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ABSTRACT

“Convergence” is a paper in support of a thesis exhibition of the same title, written in partial fulfillment of the degree of Masters of Fine Arts at the University of Calgary. It deals with issues relating to the symbiotic relationship between human beings and machines.

I begin with a discussion of two scientists and their comparisons between man and machine, or more specifically, man and his machine-like qualities.

In the second chapter, I relate the story behind my own investigations into man’s machine-like character through a discussion of my briefcase projects. I further explain why this ideal is relevant to my work and why it has intrigued me.

The third chapter of this paper focuses on my fascination with the industrial aesthetic, discussing the Industrial Aromatherapy and Sound Therapy pieces of my thesis exhibition. I conclude by discussing the concept of man as a machine and his quest for mechanical enlightenment. I believe that this is not merely an attainable goal, but also a glorious one.

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Biomechanik, der Mensch belebt den Stahl. Bio mechanics, man brings steel to life.
 Gedanken integral, Thoughts are integral,
 Die Seele Digital. The soul is digital.
 Biomechanik, das Leben wird kodiert. Bio mechanics, life is coded.
 Gefühle generiert. Feelings are generated
 Natur perfectioniert. Nature perfected

Anthony Rother

“Filename: Pinball.

You don't play pinball with just your hands, you play it with the groin too. The pinball problem is not to stop the ball before it's swallowed by the mouth at the bottom, or to kick it back to midfield like a halfback. The problem is to make it stay up where the lighted targets are more numerous and have it bounce from one to another, wandering, confused, delirious, but still a free agent. And you achieve this not by jolting the ball but by transmitting vibrations to the case, the frame, but gently, so as the machine won't catch on and say 'Tilt'. You can only do it with the groin, or with a play of the hips that makes the groin not so much bump, as slither, keeping you on this side of an orgasm. And if the hips move according to nature, it's the buttocks that supply the forward thrust, but gracefully, so that when the thrust reaches the pelvic area, it is softened, as in homeopathy, where the more you shake a solution and the more the drug dissolves in the water added gradually, until the drug has almost entirely disappeared, the more medically effective and potent it is. Thus from the groin an infinitesimal pulse is transmitted to the case, and the machine obeys, the ball moves against nature, against inertia, against gravity, against the laws of dynamics, and against the cleverness of its constructor, who wanted it disobedient. The ball is intoxicated with vis movendi, remaining in play for memorable and immemorable lengths of time...” (Eco, 187)



(Net, XX)

Part I Introduction: Always Gets the Replay

In 1931, Raymond Maloney brought forth the first operational prototype of the game we today recognize as *Pinball* (Net, II). Maloney's brainchild, 'Ballyhoo', consisted of a crude, legless, flipperless wooden box, designed as a countertop novelty (Net, IV). This revolutionary design, albeit incredibly rudimentary and devoid of any sort of strategy, was intended to sit atop shop checkout counters and was pitched as mere "assistance in the appeasement of impatient customers". Five years later, the game having recognized instant success, the 'Bally Corporation' as it came to be known, began to reap the harvest of its once questionable investment. An unprecedented phenomenon, Bally stood as perhaps the first example of an American industry geared solely towards interactive consumer entertainment. The label 'Pinball' (as legend has it) was coined when designers, struggling to come up with a solution to the problem of people shaking and tilting the games, proposed the idea of pounding "sharp nails and *pins* onto the sides and bottom" (Net, III) of each machine. The idea was quickly rejected "on the assumption that players would get so mad that they might inflict some real damage upon the machine". Although no machines bearing pins actually came into production, the concept became widely known through industry hearsay and the name stuck. Pinball gained momentum steadily through the subsequent decades, each generation rediscovering and embracing the simplicity of what the rock band 'The Who' described succinctly as "The Silver Ball".

In 1983—"ground zero of the explosion of electronic video games" (Net, III)—the fate of 'The Silver Ball' became dubious at best. Hitherto holding a commanding dominance of interactive gaming entertainment, Pinball's popularity waxed and waned completely and without warning, leaving it to account for "a feeble 5 per cent of the arcade market" (Net, IV) by the year 1985. Bally and Gottlieb (the two primary manufacturers of the game) were struggling desperately

to stay above water while electronic simulations of Pinball began to emerge and flourish. Many speculated that the classic game was quite literally on its last legs, an outmoded form of hardware that had seen its day. Not since 1942 (when Pinball was banned in New York because it was viewed as a game of chance rather than a game of skill) (Net, III) had Pinball been in such jeopardy. As in 1942 when New York Mayor Fiorello Henry LaGuardia symbolically smashed a number of machines publicly (Net, III), the 1980s witnessed the systematic eradication of countless aging Pinball terminals.

However, at the close of the millennium, the state of affairs began to radically change. Pinball mysteriously began to defy the forces of nature and those who had gravely prognosticated its demise. Contrary to mega-trend speculation and market analysis, the game began to make a miraculous and financially astounding recovery, leading to talk of a new Pinball ‘Renaissance’ of sorts, a return to its former days of glory. By 1995 the game had completely maneuvered out of its downward spiral, returning to occupy some 38 percent of the now estimated 8 billion-dollar gaming industry. In the February 2000 edition of the technology oriented magazine *Wired*, a confused gamer writes

What is it about pinball? The bastard child of Yankee ingenuity and pop-cult razzle-dazzle, pinball manages to be at once seedy and silly. And it's fun – the perfect expression of 20th-century America's technological quest for trivial distraction. Not quite a sport but more than a game, pinball is perhaps best seen as a media machine. It unveils a kinetic cosmos under glass, a comic-book world of collisions and speed that draws us in even as it remains forever out of reach...

Clearly those on the front lines of technology were as perplexed as those monitoring the pulse of financial anomalies. By some inexplicable twist of logic, modern youth had enthusiastically thwarted prediction and precedent to embrace an anachronism, an amusement enjoyed by their fathers and grandfathers.

The reemergence of the game of Pinball in an age of computer simulation is rationalized by many as a mere ‘low-fi’ revival, similar to the recent vinyl record

phenomenon. In the same way that people have again come to appreciate the 'mellow' sound of LPs and the indefinable ambience of vacuum tube amplifiers, pinball machines also can be seen as a fascinating example of a return to a past technology, a re-embracing of old popular culture. Others argue that the renewed interest in Pinball stems from the game's unpredictable nature, the fact that the polished ball, unlike pure electronic environments which may be adapted to over time and eventually dominated, behaves from beginning to end with complete randomness. As David Vogel, an 11 year old gamer, states matter-of-factly, "With Mortal Kombat, you know the guy's leg is going to go up the same way every time, whereas with Pinball you never know what's going to happen". Still others believe that the cause of Pinball's revival lies in the modern embellishments that now accompany the original simplicity of the game. The addition of dot matrix displays, digital sound and voice effects, and uncanny automation of the game board itself are identified as the chief contributors to the games unnatural resurgence. "It's hard not to plunge a quarter into a machine that speaks to you in Clint Eastwood's voice, or rewards you with a holographic image of the Creature from the Black Lagoon" states Kendall Hamilton, a researcher for *Newsweek*.

Yet none of these factors, I believe, is the true explanation as to why Pinball has become a permanent and ubiquitous facet of modern society. It would be difficult to name a single other trend, be it the hula-hoop, skateboard or Frisbee, which has endured an astonishing 71 years. More difficult still would it be to trace a novelty that had not at some point fallen completely from prominence and disappeared during its history before reemerging once more into the mainstream (Pinball, of course, has unsettlingly been with us since its inception). Why has the game of Pinball endured where so very many others have flagged and failed? Just what could be the true source of the so-called 'Silver Ball's' charm and indelible appeal?

I believe that the true causes of Pinball's extensive popularity are to be found in the nature of man himself. It is clear that something profoundly visceral and basic

occurs during the brief intermingling of the machine terminal and the human body. It may be argued that it is the direct interface, the immediacy of the contact between flesh and steel that is somehow attractive to those who play Pinball. Every element of the game exists concretely, in real time, as much an inhabitant of the environment as its human counterpart and opponent. When you score a replay, the sharp ‘Thwack’ of the machine’s interior mechanism makes you blink, your heart accelerates, and your mind begins race. On some level, every person who indulges in a game of Pinball is keenly aware that his mechanical opponent is a finely tuned instrument of mass entertainment, a balanced and sometimes jury-rigged device that may in reality become dangerous (or that may already *be* dangerous). Conquering a machine squared off against you in the real world, the tangible and physical realm occupied by your own body, is a refreshing and exhilarating change from the user-friendly, computer simulated, smart environments we have become accustomed to today.

Another element working behind the human obsession with the anachronistic Pinball is that it forces the competitor to think ‘outside the box’. Clearly designed to be an insurmountable, Sisyphean struggle, the game of Pinball, most players quickly realize, is never ultimately going to witness defeat. Gravity and the logistics of its manufacture will never allow a complete human victory of any kind. Rather, the only possibility outside of failure is brief and short-lived intervals of ‘success’, triumphs of extended game play. This being as it may, the disadvantaged human opponent must learn fast, adapt, and more importantly, take unexpected liberties to even the playing field. Tilting, jostling, rolling and swaying of the machine are necessary tools in effectively fighting the stacked odds of the mechanism. Pinball, as the origin of its name implies, has always invited a pushing of the envelope, so to speak. It implies an unwritten invitation to bend and break the rules in one’s own favor, to take leaps of logic and follow irrational paths in efforts to stay afloat— to remain alive. In short, Pinball is perhaps the sole example of a machine that tolerates, and to some degree even *demand*s, cheating

on the part of its human operator. Forcing the mind to follow and then break free from its standard learning curve is what the game of pinball really *accomplishes*. Indeed, Pinball posits a dilemma that may only be solved by a human brain, with human intelligence and pattern recognition, and through the very human characteristic of changing the rules to solve seemingly insurmountable tasks.

Barring all of the previous explanations, one final (albeit unusual) theory may be advanced to explain the human intrigue with the phenomenon of Pinball. Simply put, the reason that human beings continue to thrust quarters into the dusty and worn out Pinball terminals around the world, the reason they continue to be excited and entertained by the conglomeration of ringing bells and snapping bumpers, and the reason they will never tire of such a seemingly trivial concept as a ball rolling up and down an incline, is that they are *themselves* machines. Pinball remains in every arcade, in every amusement hall, and in every transit terminal because people unconsciously relate to the game on a 'human' level. They see reflections of themselves in the crude mechanical contrivances and are affected; they identify with and are drawn towards these machines that are so uncannily similar to themselves in so many discernable ways.

Human beings, like the game of Pinball, exist firmly in the realm of tangible objects. Like machines, they function as relationships of chemical processes and as a collection of separately operating parts. Like machines they exhibit flaws of 'manufacture', wearing out over time, requiring repair and eventually even replacement parts (prostheses). And, like machines, humans are guided by electrical patterns, by neural 'programming', that regulate the voluntary and involuntary apparatuses of their assemblages. People enjoy interacting with machines because they are themselves so very *machinelike* in a myriad of ways; machines speak to people of themselves, their own indefinable, indefatigable natures. The human body, and more particularly the human mind, *are* in my view incredibly complex organic machines, the human brain being perhaps the most impressive servomechanism ever produced by processes of evolution. The brain, a

“1400 cc microprocessor functioning at a rate of 100 million billion operations per second” (Net, V) can and is being explored, mastered and upgraded—like a machine, like a game of Pinball.*

*For more information, see Ray Kurzweil’s discussion of A.I. (Artificial Intelligence) at:
<http://www.kurzweilai.net/meme/frame.html?main=/articles/art0354.html?m%3D10>

“I mean—how shall I put it? A certain squareness, rhythmic ponderousness, immobility...traits that are venerably German—they are syncopated and tied, to be sure, but nonetheless persevere in what is often a machinelike, stamping, hammering inflexibility and inelegance.”

Thomas Mann

CHAPTER I: THE CONVERGENCE

“I want to take you on a drive through an industrial landscape. You have to be driving, not walking because this trip is all about your interaction with machines. So you’re driving. You’re driving at night on a highway through miles of factories. This highway could be anywhere—you could be between Baltimore and Washington, or outside New Delhi or Toronto, and it would look the same—but let’s say it’s Northern Europe...You’re in a fast German car. The highway is smooth and it’s raining. The factories on either side of you are dark but you know they’re working, pounding away through the night, their machines rhythmically grinding and sliding all through the night. There are bright points of yellow lights in the distance; illuminated parking lots—a grid stretching to the horizon in every direction, connected by highways like a vast circuit board. You and your car are thundering straight along the wet highway, silent as a spark down a wire. Your windshield wipers click back and forth, back and forth. But you can’t hear them, because your stereo’s on, a big booming stereo filling your own private space inside this machine, providing a soundtrack to your own private movie, the movie that’s passing across the screen of your black German car.” (Net , I)

So begins a spirited treatise in praise of the machine, a distinctively optimistic discussion regarding the inherent merits of technologically enhanced music. It would seem that the author wishes to immerse himself in the synthetic and the artificial, to be at one with the power inherent in a machine-driven environment. Certainly this author is not alone in these aspirations, for one could easily (by way of the internet) find other, similar exaltations on almost any technology-related subject that one would care to imagine (yet perhaps not presented with quite the enthusiasm of this particular author). Everything from a myriad of technological treatises and cyber-philosophy to vehement endorsements of so-called ‘smart

homes and environments'; from progress made in every branch of the scientific tree to advancements in the machineries of war, and, of course, the computer. Hidden amidst this galaxy of raw information and sometimes-unintelligible techno doggerel, one may perchance stumble across the viewpoint which holds that man *himself* may be regarded as a machine, indeed, perhaps the most significant machine ever created through processes of evolution. One could begin with a dissertation by the artist STELARC that refers to the human form as a "bipedal, breathing body with binocular vision and a 1400cc brain functioning at a rate of 100 million billion operations per second". Another Internet article finds Extropian spokesperson Max More forecasting the chemical means of "shutting off crude biological mechanisms like pain and the sex drive". (Net, VI) A recent novel by cyberpunk author Douglas Coupland, *Microserfs*, witnesses a soliloquy, in which the main character reveals,

"I'm coming to the conclusion about the human subconscious, that, no matter how you look at it, machines really *are* our subconscious. I mean, people from outer space didn't come down to Earth and make machines for us...we made them ourselves. So machines can only be products of our being, and as such, windows into our souls...by monitoring the machines we build, and the sorts of things we put into them, we have this amazingly direct litmus as to how we are evolving." (Coupland, 228)

This theoretical position, if it may be called such, is by no means a new phenomenon. Undoubtedly, as long as there have been machines in existence, regardless of their simplicity or crudeness of design, there have likely also been those people intent upon forming connections and relationships between themselves and their mechanical counterparts. Perhaps one of the earliest

documents (and likely the first formally published doctoral study on the matter) ever written proposing that people could be directly viewed as mechanical entities was published in 1748, by a physician named La Mettrie called *L'Homme Machine* (Man A Machine).

La Mettrie and the Exploration of Man's True Nature



(Net, XXVII)

Julien Offray de la Mettrie was born in Saint Malo, France, on the twenty-fifth of December, 1709, to Julien and Marie de la Mettrie (Net, VII). La Mettrie's father, a tradesperson, was sufficiently well to do to provide a higher standard of living for his family, and he demanded that his son be sent to nothing less than the finest institutions of learning. The young La Mettrie was raised in a strict, scholarly environment and when he was of age he was "sent to the college of Coutance to study the Humanities" (Mettrie, 3).

Upon graduation, he continued his education in Paris, at the college of Plessis, followed by a brief sojourn at Harcourt College. At this point, it was decided, on the advice of a mentor professor, Dr. M. Hunault, that La Mettrie would be best suited for a career in the medical profession. Studying for his doctorate, “the young La Mettrie applied himself to the study of anatomy, and “for two years worked at the dissecting table”. (Mettrie, 4). It was soon recognized by laymen and scholars alike that La Mettrie was indeed worthy of the title ‘budding genius’. Devoting time to translation, chemical theory, the study of venereal disease, vertigo, smallpox, philosophy and, of course, physiology and anatomy, La Mettrie was indeed an enlightened thinker and an astonishingly productive scientist.

The decisive turning point of La Mettrie’s career (and for our purposes, the moment of enlightenment) occurred in 1742, while holding a temporary commission as “physician of the guards” during the battle of Dettingen. While involved in the famous ‘campaign of Freiburg’, La Mettrie fell victim to a “violent fever” that caused him to hallucinate and remain bed ridden for days. It was during the throes of this malady that it suddenly became apparent to him that “he could clearly see that thought is but a consequence of the organization of the machine, and that the disturbance of the springs has considerable influence on that part of us which the metaphysicians call soul” (Mettrie, 6). Upon his recovery, La Mettrie’s convalescent revelation became the driving force and focal point of his research, underpinning all of his later theoretical work.

By 1745 La Mettrie was well on his way to becoming a devout Materialist (the belief system that maintains “all entities are composed of, or are reducible to, matter, material forces or physical processes (Net, VIII), allowable in part to the disciplined, objective approaches observed during his years spent dissecting and analyzing human physical structures. Such writings as Descartes’ (1596—1650) *Treatise on the Passions of the Soul* added fuel to his already rapidly evolving ideology. It may be recalled that “Descartes sought not only to prove the existence of God and the Soul, but also demonstrated how all the limbs can be moved by the objects of the senses and by the spirits without the aid of the soul; that it resides in the pineal gland, and that animals are machines” (Net, VIII) According to Descartes, animal forms (this term encompassing all earthly organic life including the human body) could in no way be differentiated from the other elemental forces and structures of the Earth. Organic life forms were mere mechanized assemblages, free of anything angelic, ethereal, or irrational.

It became obvious to La Mettrie that Cartesian thought fell short; the concept of Dualism (The ancient Greek notion that a man's soul is of an entirely different essence than his body, and indeed, that they are completely alien to one another) (Net, X) salvaged “human uniqueness” from a world of mechanical beastliness (Net, IX). In other words, to retain a distinctive natural hierarchy between animal and human classes (and probably on some level to avoid becoming labeled a heretic), Descartes clearly delineated the human ‘mechanistic’ body from the

completely anti-physical entity known as the soul. The soul, according to Descartes' *De Homine*, undoubtedly *did* exist.

La Mettrie, however, refused to make any such delineation. In 1747, the year before his forced emigration to Amsterdam, La Mettrie wrote a book entitled *The Natural History of the Soul*, a precursor to the now-celebrated *Man a Machine*. The book "did great violence to the concept of dualism, which it dismissed outrightly as a ruse employed by Descartes to trick the theologians into swallowing the "poison" hidden in the analogy between man and the animal-machine" (Net, XI). Almost immediately La Mettrie was branded an 'unethical hedonist' and became the object of intense derision amongst the entire scientific community of France. So incensed were the intelligentsia with La Mettrie's views that the "Parisian Parliament ordered all copies [of his book] burned" (Net, XI). La Mettrie, now an outcast and a radical, was urged by the Duke of Duras and the Viscount of Chaila (Mettrie, 8) to seek asylum in Leyden, Amsterdam.

It was in Leyden, in 1748, that La Mettrie wrote his final, and by far most inflammatory treatise expressing his views on the Atheistic and Materialistic nature of man. The pamphlet 'L'Homme Machine (for it resembled less a book than a loosely assembled conglomeration of ideas with a linking ideological thread) was the unashamed and the complete fruition of all La Mettrie's beliefs. It was in this pamphlet that La Mettrie "described human beings as self-moving mechanisms and sought a wholly neurological basis for mental activity" (Net, IX).

Basically, La Mettrie took steps to transcend Descartes' final conclusions regarding the distinction between animal and machine. He resolved that,

If the animal can feel, perceive, remember, compare, and judge without the aid of an immaterial soul, simply by means of its nervous and cerebral organization, there is no reason that we should concede a soul to man, whose sensibility, will, and understanding are merely more highly developed animal functions. (Net, VIII)

In other words, why should man be afforded special status when it is obvious that we share a profound commonality with all the animals of the Earth? La Mettrie argues that there is no reason to carry on with such ignorant idealism, such myopic lines of thought. La Mettrie presses on, describing how his observations regarding the involuntary functions of the human body indicate a machine-like organization. He asks, "Is it not in a purely mechanical way that the body shrinks back ...at the sight of an unforeseen precipice, that the eyelids are lowered at the menace of a blow, and...that the heart, the arteries, and the muscles contract in sleep as well as in waking hours...?" (Mettrie, 132) He explains that "...man is but an animal, or a collection of springs which wind each other up, without our being able to tell at what point in this circle nature has begun" (Mettrie, 135). We are, he said, no more and no less than conscious machines.

The importance of La Mettrie's revelations cannot be underestimated. For the first time a notable scientist had thrown off the yoke of religion and the 'immortal soul', likening man callously to "a large watch constructed with...great skill and ingenuity" (Mettrie, 141). This giant leap towards pure science implied a "failure on the part of the great philosophers" (Net, XII) and that the blind adherence to

unsubstantiated and outmoded religious pseudo-intellectualism was patently ridiculous. Although not going so far as to dismiss the possibility of a 'god', La Mettrie resolved that "religion does not imply exact honesty", and that we ought not "torment ourselves about such things which we cannot know, and would not make us any happier even were we to gain knowledge about them" (Mettrie, 122). Two main points were made clear through La Mettrie's final piece, *Man a Machine*. First, that truth can only be arrived at through rigorous empirical observation, the use of reason, and systematic doubt. And secondly, that religious doctrine has no place in the understanding of the physical, mechanical and human worlds.

Ostracized from France, and eventually fleeing Holland to avoid compromising his ideology, La Mettrie lived out the remainder of his years under the care of Frederick the Great, in Berlin. In November 1751, he fell victim to a virulent illness, suffered violently from fever and delirium, and was "obliged to depend upon the science of his colleagues, and he did not find there the resources which he had so often found in his own" (Mettrie, 9). La Mettrie expired at the age of 43, leaving behind a wife and five year old daughter.

La Mettrie's profound hypothesis did not perish with its author. Although branded blasphemous and slated for destruction by numerous political bodies, La Mettrie's ideas persisted, enduring through to the present day. *Man a Machine* was to become renowned and later widely embraced, due to its revolutionary assertion that the human body is mere mechanism.

Today, we recognize that the extensions of La Mettrie's ideas may be discerned in practically every scientific discipline, in every home, and are becoming readily accepted societally. The idea that we are not unlike the machines we have built is becoming steadily more familiar to most. Indeed, it would appear to certain individuals (albeit the minority), at present, that the limitations created by insufficient interfaces between man and machine represent a more serious problem than vague notions of religious piety or the subtleties of the church of Rome.

It has always been my belief that the world of men has never been far removed from that of the machine. People, when exhibiting machine-like traits, possess a certain beauty, a discipline, and function as a celebration of humanity's best (in my estimation), the most elevated of values, and the highest of human emotions and abilities. Glimpses of such traits as persistence, perseverance, patience, stoicism, punctuality, meticulous attention to detail, tolerance, and adherence to systems of order reassure us that human beings need not necessarily feed off their emotions, that a higher realm of existence is possible, and that escape from the mediocrity of the flesh (or as William Gibson disparagingly refers to it, as '*meat*') is possible.

Take for example the ability of the human organism to designate redundant tasks to strictly 'automatic' functions, a machinelike trait that has always existed in every discipline and human action. A man mops a floor every day for a year and eventually develops routine patterns and motions. Given enough time the actions achieve effortlessness, a meditative quality in which the man performing the task

no longer acknowledges the actual work associated with his actions. The ease in which the mop sweeps around a corner, the rhythmic movement of the handle, and the dancing of the mop head over the floor surface (scarcely touching), all have become streamlined to the simplest of motions and transformed into behavior requiring almost no conscious effort. The actions have been mastered upon a cellular level and thereby dismissed from direct thought. Such behavior is, in a word, 'machine-like'. To use Ayn Rand's words, "The machine [is] the frozen form of a living intelligence". It is in the 'automatic' that man effectively becomes the machine.

Today, we see a slowly increasing awareness amongst scientists and laymen alike, an expanding openness to the possibilities that arise from the viewpoint that the human body can function as a machine, can be upgraded like a machine, and can be made to function uniformly, like a machine. Examples abound in contemporary society: from the many fitness clubs in which people refine themselves with precise and specially engineered equipment, to specially built automobiles that function with the operator to create what could be described as symbiotic driving (the Mercedes S class, for instance, has 60 separate computers, to modulate systems and achieve optimum handling while you drive). Furthermore, we see today the view emerging that the human brain can be understood not just as an organic structure, as an organ unlike any other, but rather as a neural processor, a sophisticated system of mechanical parts not unlike a computer. Let us look to the work of Dr. Maxwell Maltz to illustrate this view.

Maxwell Maltz and ‘Psycho-Cybernetics’



Maxwell Maltz, a graduate of Columbia University's College of Physicians and Surgeons, is widely regarded as one of the world's most respected plastic surgeons (Maltz, preface) as well as a very highly regarded psychologist. After nearly a decade of performing hundreds of operations and conducting extensive research concerning everything from German missile guidance technology to hypnosis, Dr. Maltz published his ideas in the book *Psycho-Cybernetics*. Published originally in 1960, it went on to become a highly acclaimed bestseller. The book, though steeped in "power of positive thinking" rhetoric, was one of the first to equate the patterns of the human mind with mechanical 'Cybernetic' functions.

Maltz (like La Mettrie) meticulously documented his work at the operating table, recording the reactions of his patients before and after each respective

procedure. His findings were shocking and almost always unpredictable; for years Maltz was at a loss to understand his results. The post-op patients, it seemed, responded almost arbitrarily to the aftermath of the plastic surgery they had received. Some became exuberant with the removal of their bandages, the small lift or tuck causing untold joy and creating profound new sense of self. Others, it seemed, were overwhelmed with humiliation and melancholy, their new improvements effecting no change in their demeanors or world outlooks (as they had thought themselves ugly before). No matter how small or insignificant the changes effected to the former group, they would not be dissuaded from believing that they had been literally ‘transformed’, that they were wholly new people. The latter group could likewise not be jolted from their beliefs, despite the assurances of close friends that they looked much improved, or even beautiful.

Where did the change in perception occur, and why should such otherwise rational people behave in such radically different ways after an admittedly minor surgery? Why did the “Duchess...after being given a classic nose and a face that was truly beautiful...still continue to act the part of the ugly duckling?”(Maltz, 7) Why was it— when Maltz was a student in Germany— that he saw “many other students proudly wearing facial sabre scars much as an American might wear the Medal of Honor?” (Maltz, 9) The answer became clear to Maltz after reading the new work of such notable scientists as Norbert Weiner and Dr. John von Newmann. Maltz writes enthusiastically,

The new science of cybernetics has furnished us with convincing proof that the so-called 'subconscious mind' is not a 'mind' at all, but a mechanism—a goal-striving 'servo-mechanism' consisting of the brain and nervous system, which is used by and directed by mind. (Maltz, 12)

Being cautious not to fall into any unsavory political incorrectness, Maltz repeatedly stressed that "Psycho-Cybernetics does not say that man is a machine. Rather, it says that man has a machine which he uses." (Maltz, 19)

The body, says Maltz, while definitely *not* a machine, can be made to function *like* a machine with the conscious mind acting as the helmsman (the true Greek translation of the word 'cybernetic') of the willing flesh. The 'cybernetic' unconscious mind must be inundated or "programmed" with positive feedback loops and a clear goal to achieve maximum potential as a 'serving mechanism'. As La Mettrie said some 212 years earlier, the mind functions like a collection of springs, like clockwork. Essentially Maltz is repeating this, stating that the mind may be thought of as a mechanism for success, or a mechanism of failure, all depending upon what the conscious mind dictates. The Servo-Mechanism of the unconscious sets about achieving all goals laid before it. Irrational, self-sabotaging commands (one does not believe that these will actually occur) bring about failure, while clear, rational and positive aspirations are practically certain of success.

It may be easily understood, then, why Maltz's patient investigations indicated the forked path that they did. The buoyant and positive patients had 'programmed' themselves to expect bright, life-altering changes, and most likely could never have been convinced that the procedure had failed or that the physician was

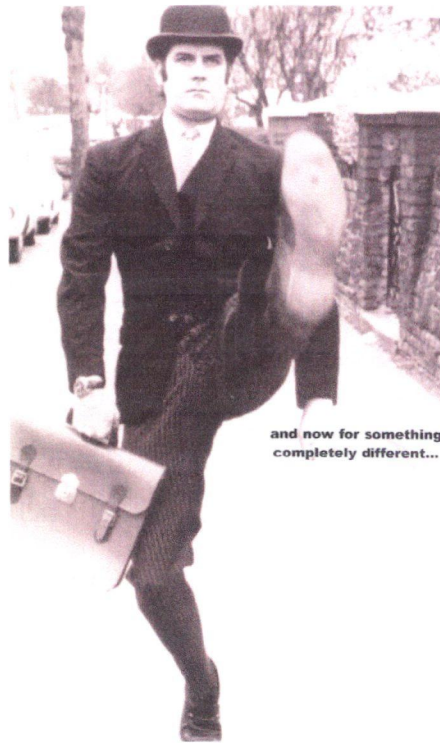
incompetent. Meanwhile, the morose and unhappy groups had programmed themselves with expectations of failure and were fully prepared to receive only a poor result. Maltz summarizes the process,

First of all, a great deal of data must be fed into the machine. This stored or recorded information is the machine's memory. A problem is posed to the machine. It scans back through its memory until it locates the only answer which is consistent with and meets all the conditions of the problem. Problem and answer constitute a whole situation or structure. When part of the situation or structure (the problem) is given to the machine, it locates the only missing parts, or the right size brick, so to speak, to complete the structure." (Maltz, 22)

In other words, the mind can only arrive at conclusions that are logical, that have been confirmed over time through past similar experience, and conclusions that a person has deemed to be truthful, rational possibilities. To a person of melancholy disposition, the possibility of a successful surgical aftermath does not fit with past situations and structures, and is therefore not a plausible conclusion to the Servo-Mechanism executing the given commands.

When asked by someone to explain why I make the kinds of artwork that I do, and for whom it is ideally intended, I have no hesitation in explaining that it is for 'people of the machine' and that I make it for romantic reasons (I see things as they *ought* to be, not how they actually *are*) and an idealized audience. By 'people of the machine' I refer to those driven by passion, to those fully immersed in modern technology, and to people who can visualize themselves as La Mettrie's spring-driven organic machines, replete with a mechanical brain and an unconscious Servo-Mechanism bringing to fruition each of his desires.

CHAPTER 2: AND NOW FOR SOMETHING COMPLETELY DIFFERENT



(Net, XIV)

The Briefcase Containment Projects

Originating from purely utilitarian sources, my briefcases have proven to be some of the most rewarding and anomalous objects to create and explain. In every way, the cases are examples of my odd belief system, for they convey all my ideals succinctly, and coincide exactly with my own visual aesthetic (that which appears in my two-dimensional work, as well as every other artistic venture).

The idea began in the simplest of ways and came to culmination in the same fashion some five years later. The shorthand of the mechanical briefcase is as follows: for quite some time I carried a conventional style briefcase that I had purchased for almost nothing from a luggage wholesaler. I enjoyed the formal feel of a business briefcase, as opposed to the ragtag look of a backpack or a gym bag (which were unfortunately considered the height of fashion at this time). This cheap, poorly made specimen, a case composed of vinyl and fiberboard (and probably old wash cloths), almost immediately began to degrade through use. Every day, I made my way to work by bicycle or bus, my case burgeoning with books and eccentric paraphernalia, and every day the case became increasingly dilapidated—a corner fraying here, a hinge liberating itself there, it was a cumulative degeneration. And so it came to pass one day, while riding my bicycle, that the handle of my trusty case broke free, surrendering my entire collection of flotsam and jetsam to the tender mercies of the oncoming traffic. Once liberated from its owner, the case made its way beneath the wheels of a near passing car, then another...and another. Meanwhile, books, papers, photographs and flashcards took flight in the jet stream of an enormous city bus, never to be seen again.

Some days later, after collecting together all the pieces of my once proud case, I decided to attempt to rebuild it, to somehow return the smashed flat structure to a functional state—a briefcase brought back from the grave, so to speak. The violence it had endured intrigued me, while nostalgia for an object that I had carried for well over a year drove me to salvage whatever I could. After

organizing all the components and discarding those rendered useless by the accident, I reformed the fiberboard base using carpenters glue, silicon, and packing foam. Taking sheet metal, I bracketed the misshapen edges and corners as one might a broken human limb, affixing the steel with aluminum, rivets and huck-bolts.

The scarred surface of the case, which had sustained the greatest damage (and actually bore the tread marks of one or more of the vehicles), I proceeded to cover with a custom-printed, laminated graphic image. After deliberation I selected a black and white logo that intrigued me: an enlargement of an antiquated service label, salvaged from an old German radio (discovered in a German scrap yard). “*Deutscher Kleinempfänger*”, it now read in a long abandoned typeface, along with helpful service suggestions like “*vor Nasse schützen*”, keep dry, and “*vor inbetriebnahme auf richtige Netzspannung achten*”, before putting into service, insure correct network voltage. After repairing several other trivial things—hinges, locks, handle, and the like—the case was restored to operational status. I was pleased with its appearance, a now ambiguous instrument with the combined characteristics of a business artifact and those of a battle-tested armament.

Up until this point, I had placed little significance upon what I had just created. It was mere whimsy or amusement for me, a small experimental work that helped provide reprieve from the grueling two-dimensional work I was pursuing at the time. Yet, before long, it became clear that the amusing object was no longer a mere briefcase at all. Rather, it had been transformed, with its appearance, to

become something larger and grander than a mere briefcase in ways I could never have foreseen. Indeed, now I found that wherever I went, whether it be to a corner store or to the bank, people goggled at the case I was carrying as though it were a leashed dead cat. It seemed humorous to me that people, upon seeing the metal reinforced case covered in cryptic warning labels, immediately became curious, forming their own ideas as to what the case might contain. What had once been part of the camouflage worn by business-class people, unremarkable to the point of near invisibility, now became outstanding and colorful, a strange object of conjecture and mystery.

One day a stranger asked me what exactly it was that I was carrying in my armored case. Obviously expecting something extraordinary, the man's eyes glittered with excitement, with an anticipation beyond ordinary curiosity. Not yet recognizing the potential of the interesting situation, I explained disinterestedly that the case contained mere writing materials, documents, and some assorted literature. The man, visually disappointed, seemed deflated by the commonplace explanation. His eyes fell and clouded, and his demeanor changed with an abruptness that startled me. "Oh, well...I see", said the man, "thank you then, cheers", whereupon he parted from my company.

This was by no means an isolated incident. Everywhere I went people incessantly queried me regarding the contents of my case, and in each case I revealed the banal reality of the situation. With pleading eyes and bated breath

they approached me, and with expressions of disillusionment and impatience, they inevitably took their leave.

I pondered these situations for quite some time, musing over the details of the odd and varied reactions. “What had the man expected anyway?” I asked myself. Clearly, it was something more, something beyond trivial reality. It occurred to me that perhaps fantasy was the correct avenue when faced with a situation of this kind, and thus I resolved that I would give the people what they wanted (“they want blood, give it to them, even if it’s your own”, was the expression that rang through my mind at the time).

“So, what’s that you’re carrying in the case then?”, asked the pedestrian waiting next to me at the street corner. Having the time between traffic signals, I decided to let him in on my secret. “Well sir, *this* is an original, cracked down MG 34 assault rifle, complete with interchangeable barrel and custom made muzzle silencer. Made in Germany, one could fire between eight and nine hundred rounds a minute with one of these, ...if one was so inclined”. With a placid expression and unwavering eyes, I conveyed the flagrant lies fluidly, a theatrical piece worthy of the stage. The man’s face, caught in an expression between disbelief and surprise, nevertheless still visibly concealed a hint of disillusionment; a subtle grimace betrayed signs of letdown, of unfulfilled expectations. Although he had obviously taken my outrageous words as fact, the truth of the matter was that I had unknowingly aimed too low. The man had evidently anticipated greater

indulgence into fantasy than what I had had to offer. And so I resolved to take further steps.

Standing in line beside me at the grocery store, the woman asked, “Excuse me, but what *is* that you’ve got in the case there *anyway*?” I turned to cast a blank look in her direction. After a moment’s hesitation, I peered over my shoulder and then drew nearer to her. In a conspiratorial tone and bearing an expression of absolute gravity I explained, “well ma’am, I wouldn’t normally discuss this in public, but since it’s *you* asking, and seeing as we have the time, well...I suppose it’s all right”. After another quick scan of the area, I proceeded to *tell* her. “What I have here is 12 pounds of highly volatile plastic explosives, complete with detonators and blasting caps”. Her eyes widened, and her mouth parted slightly. “I have to deliver this case to a demolitions expert downtown this afternoon”, I pressed on, “but seeing as I was so close to the grocery store, I thought I had better quickly stop in”. “I’m getting paid for this”, I explained, giving her a wink and a cheerful thief’s smile.

As one might expect, the results were much the same as witnessed during the previous effort. Although at no time doubting my veracity, and becoming visibly alarmed by my straight-faced lies, the woman, nevertheless, showed signs indicating that she was somewhat unimpressed. Her imagination, it seemed, could paint a far more visceral picture than anything I could begin to approach with my fantasies.

And this came to be a highly familiar pattern over time, my exploits taking on ever-greater dimensions as I strove to test the limits of what would satisfy people's splendid expectations. I sampled every outlandish possibility, explaining to people how it was that I came to be carrying Iraqi missile components, live Marburg viral specimens, instruments of torture, old pinball machine parts, and cryogenically frozen human organs. Essentially, I could tell people almost anything (and likely did so), no matter how incredible, no matter how far from reality, and still they believed, still they took me seriously. Yet always, there remained the sense that I was giving away too much, that by revealing how the magician's trick worked I was ruining the grandeur of the encounter and leaving any sense of wonder in ashes.

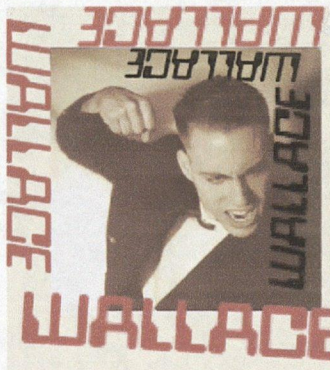
It occurred to me after exhaustive experimentation, that what the case really contained was absolutely inconsequential. Whether the briefcase carried toxic waste from Hanford or my lunch in a ziplock was unimportant in each encounter and ultimately irrelevant to each person addressing the question. What was actually inside the box was *unresolved suspense*. The potential for disaster, a dynamic force requiring no explanation or substantiation, was the attractive and fascinating element. The case was less a threatening object in itself than a vessel, a form of containment birthing every conceivable ghastliness. I realized at once that the solution required less on my part, and not more as I had once imagined. The possibilities generated by each person's imagination, I decided, could create greater variations if given freedom and left to wander.

Thus, I began a new course of action. Rather than outline in specific terms what *exactly* the briefcase contained, making concrete what was before intangible, I now provided the viewer with vague and ambiguous explanations. As opposed to revealing everything, I decided, instead, to reveal nothing, whetting people's imaginations and sharpening their desire for answers. When confronted by some curious passer-by, I would now explain abruptly that the contents were, "classified". If pressed I might add that I was "under strict orders of confidentiality, and that I would not reveal the information they sought under any circumstances". If further pushed for data I would always conclude with the classic, "I could show you what is inside this case, but then I'm afraid I would be forced to kill you". I then, invariably, would take my leave, allowing the confused (and possibly amused) viewer unlimited possibilities, a veritable unclouded sky of speculation.

Why the Briefcase Projects Intrigue Me

Oscar Goldman: "Gentlemen, we can rebuild him. We have the technology. We have the capability to make the world's first bionic man. Steve Austin will be that man. Better than he was before. Better ... stronger ... faster."

—Excerpt from 'The Six Million Dollar Man'



The briefcase project has intrigued me from the beginning for a number of reasons, perhaps the strongest being the strangely *human* nature of each undertaking. The phenomenon may best be summed up as the intermingling of seemingly unlike elements, specifically, the old and the new— elements of nostalgia fused with a unique brand of futurism. For example, every project begins with a uniform element, that is, with an antiquated briefcase, discarded and dilapidated, illustrating my penchant for anachronism, (objects taken from a past time period for reuse within another – namely, our own). Using these found objects, I then proceed to execute a set of reconditioning procedures, the adornment of the exterior using fabricated steel and the materials of heavy industry.

Were I aspiring to the ideals of a *true* Futurist, my cases would probably echo “Star Trekkian” sensibilities, that is, of a streamlined ‘clean room’ aesthetic devoid of flaws or incongruency. Such a future, I believe, is neither realistic nor tenable, it is clearly utopian, “a place where no sane man would consent to live under any conditions if he could possibly escape” (Glover, 149). A clean aesthetic, furthermore, ignores the true beauty of human machines, the flawed and dirty specter of big cities and industrial complexes. I therefore search for the rudimentary and ominous façade of machines, the proud and relentless aesthetic of true human nature. While I certainly could follow the path of ideological perfection, striving for a flawless and cosmopolitan view of humanity throughout each project, I opt, instead, for imperfection: the scarred face of a steel foundry or

the ruthless efficiency of a chemical plant; floors covered in aluminum checkerplate, doors of rotted iron and the besmirched faces of worn Pinball terminals in queues stretching out for miles across the floor of an abandoned strip mine.

Perhaps the single most impressive characteristic of each case is its ability to endure beyond its expected longevity, defeating notions of 'life expectancy' or 'warranty'. Unlike briefcases of a standard variety, each of my cases, once enhanced with the aid of technology, become something far greater than mere vessels of transport, penetrating beyond the veil of the flesh. The cases, rescued from the bleak prospect of being discarded, succeed in ascending above conventional dogma, beliefs that maintain that life is finite, that all things must come to an end, and to quote Fight Club's Tyler Durden, that "we are all part of the same compost heap". The briefcase projects parallel the potential of the human form, that is, the body itself, by thwarting temporal boundaries.

In a word, what the cases deliver to us is a vision of immortality. As in ABC's television smash hit, 'The Six Million Dollar Man', that witnessed the technological rebirth of the mortally wounded astronaut Steve Austin, so too are the briefcases I salvage reclaimed and made functional once more. In short, the cases, once refurbished and clad in steel, are direct metaphors for people themselves. That is, for the people that presently live with prosthetic parts and artificial organs, the people that carry and wear technology to the extent that it becomes an inseparable part of their persona, and of course the people of the not

too distant future to whom the human body shall appear upgradeable or expendable, a mere vessel for the expedient transport of the mind.

CHAPTER 3: I LOVE THE SMELL OF DIESEL IN THE MORNING



So -- so you think you can tell...
 Heaven from hell,
 Blue skies from pain?
 Can you tell a green field,
 From a cold steel rail?
 A smile from a veil?
 Do you think you can tell?

-- Pink Floyd

Industrial Aromatherapy

Industrial Aromatherapy and the Isolation Booth projects were drawn from my own experiences with heavy industry and other assorted mechanized environments. After two years of working in a steel foundry, and a great deal of sundry time spent in places like metal recycling plants, shipping yards, scrap yards, industrial kitchens, and vehicular accident claims compounds, I came to

realize that not only did there exist a tangible and very distinctive industrial aesthetic, but also that one can grow to love it, to crave the finer nuances of these unusual milieus.

A certain instance comes to mind that may help to illustrate this rather ambiguous statement. The particular night, having occurred some five years ago by my estimation, may well have been the coldest night of the winter. The incident remains clear and vivid to me, as does the mood and the spirit of the place, which will probably never quite completely relinquish its hold upon me.

I pause and take a breath, standing just outside the door in my dirty uniform and helmet. It's 0300 hours and pretty much everyone's gone. Some secretly sleeping, some playing computer Solitaire or Minesweeper in all-but-forgotten offices, wishing their 12-hour sentences were through. The only sounds to be heard are the dull growl of heavy diesel engines in the distance and the omnipresent crashing of metal on metal. It comes from everywhere, and yet from nowhere discernable. The air is completely placid and stripped of radiant energy, at once both dry and saturated with slag dust, inert but strangely conducive to sound. You can hear for literally miles on a night like this. Somewhere, I can hear scrap steel being loaded into boxcars from enormous conveyor belts, a dark metallic roar without cession.

Shivering partly from the cold and partly because my somnambulist circulation is hitting all new lows, I decide to take a walk to the outer perimeter fence. Shambling down the dusty slag road, my battered steelworker boots ratchet at the chunks of slag beneath their heavy treads. A veritable Conrad Veidt in this anomalous expressionist environment, I reel towards the stark, 10-foot wire fence that surrounds the entire plant. I slowly thread my gloved fingers through the steel lattice and stare off into the darkness beyond, not really seeing anything, but not exactly trying to either. My rasping breath creates a plume of moisture, as I rest my cheek against the cold steel grating.

All at once, I hear it. From somewhere in the darkness comes a resounding crash that causes me to flinch with its piercing intensity. So far away that I cannot begin to resolve from whence the sound came, I peer through the wire grille before me, discerning only darkness. The noise comes again, a violent sound that I soon identify as that of metal being beaten, probably with a large hammer. It occurs again and again at random intervals, echoing through the night and eventually taking on a rhythm. I close my eyes and imagine the intensity of the person causing the sounds, the ruthless force with which the steel is being pounded. I ponder over the possible reasons why a person should wish to repeatedly hit something that hard, and arrive at nothing plausible.

That is when I realize that I am in fact surrounded by music, some subtle and delicate, others quite harsh and cruel. The combination is a veritable symphony, and I, as the sole member of its audience, stand transfixed in the cold wasteland, eavesdropping. An industrial symphony, it occurs to me, being performed by machines and a single anonymous solo percussionist. I, alone, revel in the moment, in the composition of these unknown musicians, these artists of iron and steel.

So the idea was set in motion: to conjure the wondrous splendor of industry without actually having the surroundings present; to convey the pure mechanical aesthetic to others without them ‘ever having to leave the comfort of their own homes’, so to speak. By emulating the sounds and smells of these ‘lands of excess’, as I have come to call them, I could, perhaps, begin to influence attitudes and thought patterns in positive directions. Through disembodied sensory experiences it was feasible that I could begin to establish a ‘mechanical rapport’ in people while, in turn, eliminating the feelings of fear and alienation that usually tend to accompany early encounters with factories and foundries.

Uncertain as to how I ought to go about this, I began researching the so-called “soft science” (Net, XIV) of aromatherapy. Poring over the sappy New Age books and Internet documents, I discovered a system with a great deal of historical foundation underpinning its claims. Distinguishable in the cultures of ancient Greece and Egypt, I learned, it is thought that aromatherapy reaches “as far back as 18,000 B.C., as may be seen depicted upon the walls of the Lascaux caves in France” (Net, XIV). Investigated by notable historical figures like Hippocrates and Rene Maurice Gattefosse, aromatherapy, as used as a therapeutic method, became publicly prominent in 1930, (Net, XXI).

The shorthand of aromatherapy, I determined, was that the olfactory senses are very closely linked to emotional states and behavioral modes. Entering through the cilia of the nose, the organic chemicals of aromatherapy directly affect the limbic system, “the part of the brain that controls our moods, emotions, memory and

learning” (Net, XXIV). In other words, it is believed that moods can be directly manipulated and even controlled, according to a categorized system of alcohols, esters, ketones, aldehydes and turpenes. By altering a person’s mood and disposition, he may be induced to generate the positive conditions required within his own body necessary to relaxation and, eventually, healing. The miraculous effects of chicken soup, for example, have less to do with the actual ingredients of Grandma’s secret recipe, it has been found, and more to do with the appealing scent and warm steam of the cooking broth (Net, XXIV).

Along the way, as my research progressed, I decided to visit an oxygen / relaxation studio to examine the effects of natural fragrance therapy firsthand. Seating me in a chair, the attendant strapped a medical-type plastic mask to my face and proceeded to list off a variety of smells available “for my breathing enjoyment”. I pointed to the essential oil *Helichrysum Italicum*, also known as ‘Everlast’ or ‘Immortelle’ (Net, XXII). The assistant commended me on my choice, explaining that this particular fragrance was a healing oil, effective in the treatment of sports injuries, aches, pains and the like. I nodded and mumbled a “thank-you” incomprehensibly through the mask. For the next 30 minutes I was inundated with the ‘Diffusion of Immortelle’, as it was known. Mildly pleasant at first, I noticed that as time went on, my senses became somewhat numbed by the aroma, and that by the end, I could scarcely smell a thing.

When my time was up, I rolled off the table, paid the attendant, and made my way sleepily towards the egress. With the mask taken away, I was now assaulted

by all the other smells about the studio: the flowery bouquets leaking from the various other masks, some incense burning somewhere, and even a pine tree shaped air freshener hanging near the door. I was beginning to feel a bit ill from the whole experience, and swiftly made my exit with efforts not to inhale anything more.

Once outside, I negotiated my way down the street, trying to rid myself of the smothering cloud of essential oils that trailed along with me and lingered in my clothing. Aside from having the desired result of making me drowsy, I realized, the ‘Diffusion of Immortelle’ would have the unexpected side effect of clinging to me throughout the entire rest of the day. Disgusted, and thoroughly tired of the scent by the time I reached my vehicle, I felt saturated by it, like I had somehow become infected through the whole experience; I could now actually *taste* the stench. Just then a bus roared past me, leaving a thick wake of diesel smoke that washed over me like a torrent. Incredibly, I felt cleansed and uplifted by the exhaust, like the familiar smell had somehow liberated me of the bothersome and invasive perfume. With a smile I breathed deeply for the first time since I had left the aroma bar, got in my car and drove home.

Pondering the body of research I had accumulated to this point, and reflecting over my ordeal at the oxygen spa, I realized that I was not particularly impressed by this outlandish subculture. Just why did the whole experience have to be so damned spurious, smacking of weakness, ignorance and in some cases even the occult? “The jargon of aromatherapy is a jumble of nonsensical doggerel and new

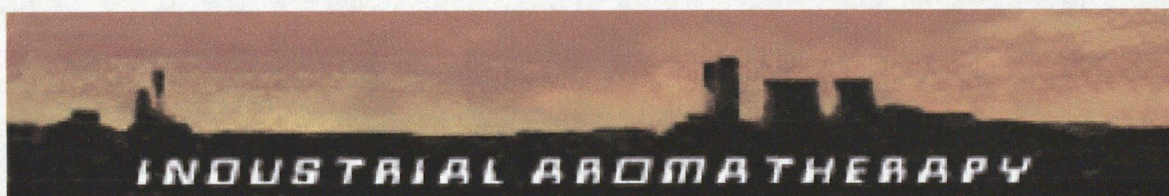
age pap”, I concluded angrily to myself. “The earthy scent promotes a grounding and balancing effect and helps us keep in touch with our physical selves”, read one description of Citrus Sinensis (Net, XXII). “Rose Oil”, read another, “is effective for all levels of life, for the soul, spirit and body” (Net, XXII). Each description, it seemed, was worse than the next, continuing down a veritable path of foolishness and the ever more ridiculous. Even *if* the dubious science did live up to its over-inflated claims, it was undermined by its own rhetoric and patently nebulous assertions.

I then realized that the project practically lay completed before me. ‘Industrial Aromatherapy’, I would call it. My hypothesis, simply put, was this: that inorganic chemical substances created by contemporary technology have as much, or perhaps more, unexplored positive potential as the organic, ‘healthy’ essential oils of nature. If considerable evidence exists that fragrant compounds have a profound effect on the human mind and behavior, then is it not fathomable that new chemical compounds, fabricated for industrial and commercial purposes, might not also begin to find applications in healing and stress reduction? The prospect that modern man, through his close affiliations with the chemicals and so-called ‘pollution’ of his artificial environment, has become not only accustomed to, but also closely linked or bonded to them, appealed to me greatly. As primitive man once adapted to his environment, his body making emotional associations with the plants and environment around him, so too have we, in all likelihood, become acclimatized to the smells of modern existence.

So I decided to design my own individually fashioned aroma spa, a space that not only brought forth the smells and essences unique to industry, but also a device that carried with it the dark sensibilities and threatening undertones of true industrial environs. In accordance with my own sentiments and aesthetic principles, I would fashion an apparatus as ominous in appearance as it would be distinctive in its unusual array of fragrances. Furthermore, in accordance to the actual pseudo-science of aromatherapy, I would write a guide, a handbook, that would explain, using its own unique lingo, the individual properties and effects of each subsequent substance. Included with this would be brief but informative introductions, a short but concise background to help introduce the history of the substance and, if possible, the inventor responsible for its creation.

I thereby commenced with the accumulation of the various necessary materials demanded in the building of such a complicated device. I began to explore the scrap yards of the industrial districts, gathering aluminum tubing, heavy wiring, gauges, stainless steel boxes, some antiquated electrical motors, and of course a myriad of pop-rivets and huck bolts. In an army surplus store I managed to obtain several military-grade gas masks from a forgotten crate, abandoned in a dungeon-like basement. Finally, I commissioned a sign to be printed from an image that I had personally fabricated on the computer. 'Industrial Aromatherapy', read the title in outdated, mechanically awkward looking characters, above a digitally pixilated silhouette of a factory.

Meanwhile, I began to write the dissertations about the industrial machinery from which I would derive the “essential oils” of Industrial Aromatherapy. These tongue-in-cheek descriptions would rely heavily upon the saccharine drivel found in the many aromatherapy reviews, Internet sites, and literature, giving the structure a twist and parodying the stylistic patterns mercilessly. What originally was articulated as “a soothing and holistic restorative for the soul” (Net, XXIII), became in Industrial Aromatherapy, ‘compounds in their most succinct form, a soothing and holistic chemical soup for the soul’. What once was described as “a breath of spiritual clarity and a wholesome relaxant” (Net, XXIV), was transformed into an experience with which ‘we inhale the smoke of circuitry, breathing the very spirit of industry, indeed, the air of our beliefs’. [For a more detailed example of this process, see Appendix A].



Included in the handbook was to be an introduction, a brief section outlining the inspiration behind the concept, and a three to five page examination of each of the following five subjects: Steel Slag, Rubber Glove, Circuit Board, Diesel Fuel, and Hydraulic Press. Moreover, to enhance the overall feeling of authenticity

throughout the document, a plethora of visually striking images was to be incorporated to help illustrate the physical source of each fragrance.

Visually, the Industrial Aromatherapy project was to be equally ambitious. The concept of mounting gas masks on a wall, not an overly thrilling thought in itself, was heightened aesthetically through careful organization of the visual components. The tubes leading to the diffuser boxes, for example, were to be configured in such a way that they appeared gracefully arched, spatially correct, and in a word, architectural. Hangers for each mask were to be constructed of chromed steel, each with several variable height settings necessary to the creation of uniformity. I purchased an industrial switch from a piece of heavy machinery that had been destroyed by fire; accordingly the signs nearby were suitably altered to match— scorch marks, holes and warps were to be added to maintain visual continuity. Everything, including the junction boxes between lines, the handbook, and even the small bottles used to contain the ‘essential oils’ themselves, were to be labeled with the trademark Industrial Aromatherapy logo, a symbol that, not unlike commercial trademarks, was made into stickers, placards, and signs.

Industrial Sound Therapy

The next logical step to realizing my vision of disembodied industry was, of course, Industrial *Sound* therapy. If contemporary man can be positively and negatively influenced by the *smells* of modern life, I mused, then would it not necessarily follow that the *sounds* of a metropolis should be that much more

significant? The sounds of urban living are today practically an incessant auditory stream around us. It is estimated, for example, that “approximately 80 million people [worldwide] suffer unacceptable levels of continuous outdoor transport noise” (Net, XXV). According to world health guidelines, proper undisturbed sleep patterns require noise thresholds beneath 30 to 35 dB. It is estimated, however, “that over 16% of all Europeans suffer more than 40 dB in their bedrooms at night” (Net, XXV). Today virtually no place seems exempt from the sounds of modern habitation, including locales previously thought to be ‘natural sanctuaries’ and places of retreat. Even in American national parks, “it is estimated that noise-free intervals rarely exceed several minutes” (Ibid, XXV).

Once again, it becomes clear that the natural state of indigenous metropolitan inhabitants is one defined by constant and *consistent* types of stimulation, including acoustic sources. The cliché about the urban dweller who takes an excursion into the countryside comes to mind. When exposed to the unfamiliar nocturnal sounds of nature—owls hooting and so forth—she finds that she cannot sleep. After hours of tossing and turning, in desperation she digs a tape recorder out of a case and proceeds to smother the foreign sounds with those of police sirens, dogs barking and car horns. Clearly we need the noises we are accustomed to hearing in order to function in an efficient and relaxed manner. It seems reasonable to assume that by manipulating that which we hear, we also thereby indirectly control our demeanors, our temperaments and the ways in which we behave.

With this in mind, I considered the various ways in which sound could be conveyed. I deliberated over such ideas as: public broadcast, individual earphone listening stations, pre-recorded soundtracks, and at one point even listening *helmets*, but nothing seemed quite as charming and amusing as Industrial Aromatherapy had. Ideally, the perfect condition for direct auditory manipulation of a subject would be one in which the person was completely isolated from others. Once the sounds and activities of the person's standard surroundings were eliminated, one could then conceivably generate all new emotional conditions. If one was so inclined, one could simulate the sounds of industry, bringing one's audience indirectly to a mechanical environment.

It was then that the idea of private auditory *booths* occurred to me. Everyone has at some point visited a conventional phone booth, this familiar element would, in theory, help to ease the subject's apprehension with the medium, especially if the sound itself were delivered across a standard telephone receiver. Taking these factors into account, I made provisions to procure some standard street-style telephone booths. I reasoned that eventually even a telephone booth must age, show signs of wear and be decommissioned. Vandals, car accidents, and acts of nature surely must take their toll on the telephone equipment around the city. All things being equal, someone must be responsible for seeing to their maintenance and / or destruction.

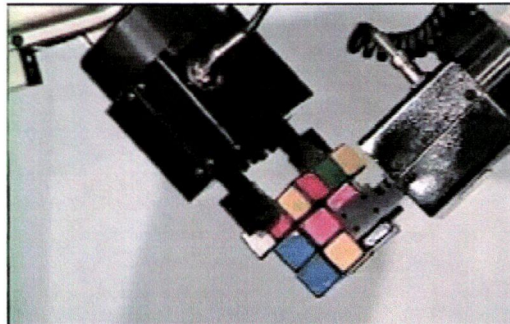
Literally months later, after much exhaustive searching for a person of authority within the hierarchies of Telus, three such 'decommissioned' phone booths were

graciously donated to my cause. Complete in every detail, these booths had tremendous potential for exploration. And thus, explore I did. Treating the exteriors in a style reminiscent of the briefcase projects, I proceeded to give each booth a refurbished industrial façade. Outfitting each booth in heavy, well-rusted checker plate steel, I affixed over three hundred pounds of metal to each booth. In addition, several panels on each side were composed of reflective Scotchlite construction tape, lending a feeling of apprehension to the outer surface. Once completely clad in metal, I manufactured six custom-made signs, two for each phone booth roof, complete with strongly colored, opaque Lexan light filters.

After addressing several other considerations including the assemblage of industrial telephone brackets, the installation of a sound system (which ran, as planned, through the phone receivers), interior lights and advertising photographs (to give some indication of where the sound originated), the project was complete.

CONCLUSION: THE CUBE MASTER

I lived my life, immortal from eternity inside
 I lived my life, so far away from everything inside,
 I lived my life, through centuries of darkness through the pain
 I lived my life, I've seen the rise and fall of humanity.
 —Marco Biagiotti



(Net, XXVI)

Sitting, eating my bag lunch in the cafeteria, by chance I glanced up and noticed the person sitting facing me several aisles away. An awkward looking fellow wearing a baseball cap and a rather nervous expression, he could very well have been transported directly out of the 1980s, judging by his antiquated novelty T-shirt. Printed across the front in glittery pressed-on letters was the inscription 'I am a cube master'. I suppressed a smile as I noted the illustration beneath the caption: a mixed Rubik's cube on the left, with an arrow moving across to a solved cube on the right. Beams of light emanated from the solved cube.

Thinking nothing more of him, I continued working on my sandwich, thinking grim thoughts about my manager and persevering with a poor novel. I was just getting started on some pastry, when I detected that something had changed at the

‘Cube Master’s’ table. Joining the McDonald’s soft drink I had taken note of just minutes before was a pair of Rubik’s cubes. Far from anything I was familiar with, these enigmas contained strange shapes on each of the sides, as opposed to just the standard colors. Furthermore, each cube bore the scars and marks of extreme wear, beaten corners and faded characters; competition cubes, I surmised.

I was just getting back to my cherry turnover, when the Cube Master broke into a frenzy of activity. Watching from the corner of my eye, I studied the man inconspicuously as he abruptly snatched a cube from the table and set it into motion. He began mixing the sides with startling rapidity, hands gliding over the object with absolute familiarity. Clearly, he was not just mixing the puzzle, but rather, mixing it *completely*. Seconds later, not a side remained recognizable, not a square in its former position. Upon randomizing the cube to his satisfaction, he set it back down and relaxed, glancing nonchalantly about.

No longer concerned with being impolite, I now quite openly stared at the stranger facing me. Obviously I was not the only one who sensed that something miraculous was about to occur, for I caught others furtively observing the Cube Master from everywhere in the vicinity. Nobody wanted to miss the resolution of this strange event, and, as I was being the most blatant, the Cube Master met my gaze and gave me the faint hint of a smile.

Just then he snapped up the mixed cube from the table face and started in on it once again. It was if time slowed down for everyone save this obtuse individual, his calm disposition all but dissolving in an instant. Where the cube had previously

moved quickly, it now ceased to be tangible entity in any way. The Cube Master, seeming never to actually make contact with the object, rather appeared to contain the wildly spinning form between his straining palms like an alchemist. A rigor mortis leer stretched across his face as he gyrated yet faster. Shoulders pumping, and every muscle clenched, the Cube Master stared with such intensity at the rotating puzzle that one could have sworn the sheer force of his will alone guided its movements. Beads of perspiration sprang up on his forehead as he performed the final adjustments to the shape, bringing an unforeseen conclusion to the demonstration. One minute and fifteen seconds later, with a profound elegance and grave expression, he slowly held the solved cube up to the light before giving it a toss and slamming it down hard onto the table before him.

Myself and everyone else in the food court involuntarily began to clap, some even jumping from their seats as the moment carried them away. We had all just witnessed something extraordinary, something infinitely beautiful and enchanting. Yet the motivation behind my applause differed radically from that of the other audience members.

I had just observed a quintessential moment, a sublime example of the potential hidden within every human being. For a fleeting instant, this unusual person had transcended all physical, temporal and rational limitations, shining with the brilliance of a machine. With a lifetime of practice and discipline this man had attained mastery over abilities with virtually no significance to the rest of the world, yet had refined them into automatic functions.

Later, in conversation, Tim (the Cube Master) revealed to me that he had received his first cube at age six, and mastered it completely by age twelve. By eighteen he had reduced the motions to a simple mental pattern, an algorithm that did not even require his visual attention to execute after awhile. His, fastest time, he confided to me, was 45 seconds, 22.05 seconds short of the world record. When I asked why he continued with the practice, as he was probably one of maybe 20 people in the entire world with such skill, he looked at me and said passionately, “Because *I am* the Cube Master”.

Were that everyone had the persistence to reach such heights. Were that mediocrity and apathy not treated as virtues by the lion's share of the populace today. I dream of a world populated by individuals who accept no limitations, who laugh at entropy and temporal finiteness, and who are able to transform even the smallest of actions into an art form if they so desire. I imagine a time in which people fully realize their own mechanical capabilities, machinelike minds and immortal physical structures. My ideal is a world in which individuals may cast their eyes to the sky, not in fear and ignorance, but with a sense that nothing is impossible, that they are an end only in themselves and that life is but a game. Perhaps this ideal is not such a long walk from ourselves as we might imagine. Perhaps it exists within each of us, just waiting to be revealed.

APPENDIX A

INTRODUCTION TO INDUSTRIAL AROMATHERAPY

Enter a man in a dark and densely wooded forest, a rain forest we shall say. Alone and on foot, the man's haunted expression and furtive glances at his surroundings lead us to interpret that he is not at ease in this milieu. In fact, it is safe to say that this man is on the verge of panic. With fear-glazed eyes and furrowed brow the man crashes forward, onward through the trees and brush, in search of something familiar, some sanctuary to which he may retreat. Let it be known that there is no such place here, no solace to be had and nowhere to hide. A low hanging bow scratches the man's forehead; a running vine tugs at his boots. Reaching forward in search of equilibrium, the man's hand finds only a nest of spider webs and warm moss. Jerking back in revulsion, his arms pinwheel wildly, and the man crashes down through the tangle and biomass. A briefcase spills open down a nearby escarpment, vomiting documents, a small computer and a sandwich onto the damp earth. A muffled scream resounds through the trees, heard by no one.

This man, you see, is in the very heart of the Brazilian rainforest, perhaps the last like it in the world. How he came to be in this place is unknown, but one fact is certain, he is completely estranged and alien to the environment. It is safe to say he has never seen such a forest, much less a tree, in his entire life. Most likely the extent of his experience with the organic may be the wild grasses that run along factory periphery fences, the creeping weeds that fight through the heavy concrete road slabs, or the thistles that mysteriously appear near the back of the ten kilometer parking complexes.

The man, pulling himself from the thick foliage and flora, his black suit and tie thoroughly besmirched, begins again to struggle onwards through the woods. His once meticulously polished shoes, now caked with mud, seek futilely for solid ground, and he very nearly goes down once more. His breath, now laborious and rasping, reflects the desperation of the man's condition, his fear and contempt for this completely, strange and arcane world.

And all at once, it begins to rain. The man's nerves, almost at the breaking point, take yet another blow when he realizes that the cascade coming down from overhead is of an entirely different assortment than that which he was anticipating. Gone are the cold black droplets of the steel foundries, the mildly acidic, slag corrupted globules that shower down almost interminably over the metropolis he calls home. In their stead come the ghastly transparent pearls of tepid, sickly sweet, and untainted liquid.

A moan escapes the man's lips as his contorted face, masked in perspiration and rain, writhes beneath the foreign substance that relentlessly falls from above. Breaking into a clumsy run, the man's self-control evaporates as he lurches towards a distant light that appears faintly somewhere ahead. Crashing through the undergrowth and bracken, blazer torn and pant legs in ruin, the man trips over a half buried log and plunges face first into a lighted open expanse.

Looking up from the fetid earth, soiled and tattered, we see our hero's face, bathed in artificial light, like the light of heaven, looking with disbelief at what stands before him: a clearing, abruptly divided from the main body of the forest. Seeing the floor of aluminum checker-plate and the fluorescent tubes swinging gently in the wind, elation overwhelms the man and he crawls on bloody hands and knees towards the convivial specter before him. Pulling himself onto the metallic floor, the man collapses, kisses the surgically clean aluminum face beneath him. Like an old, forgotten friend, long thought misplaced, he kisses it.

After a time he regains his composure. He stands and surveys his surroundings, this remote outpost of civilization, this final bastion of order. In a moment, he deduces what the structures before him are. Acclimatization booths, three of them, and beside these, a corroded iron wall containing five Industrial Aromatherapy masks. Just like back home.

With a surge of emotion he rushes over to the booths, listening with joy in turn to the distinctive soundtracks of an oil refinery, a steel plant, and a scientific wind chamber. Somewhere in the world, this grotesque and disorderly world of the organic, still remains a society of machines; a world of production and discipline, still striving bravely and marching belligerently forward.

Feeling his spirits lifting significantly, the man laughs lightheartedly, as he moves to the aromatherapy masks, so similar to those lining the walls of his former factory. Switching on the diffuser mechanism, diesel fumes assault the man's lungs, filling him with the breathtaking hydrocarbons of modern life. A barrage of vivid memories come flooding through his consciousness: the heavy transports that run day and night, the diesel oil-sand cargo trucks, belching forth their blue revitalizing smoke, and oh, who could forget the traffic, the inexorable traffic, thousands of miles of private vehicles bringing life to the city like fuel oil to an engine.

Looking through the yellowed plastic shield of the diffuser mask, the man distinguishes with anticipation the four remaining booths beside him, Steel Slag, Hydraulic Press, Circuit Board, and Rubber Glove. His eyes well up with tears of jubilation, a rigor mortis smile crosses his face, and in his heart he knows, that he

will not flag and fail, that he will ultimately survive, and that he will make it through this crisis.

THE FRUITION OF INDUSTRIAL AROMATHERAPY

The fundamental inspiration behind the project *Industrial Aromatherapy*, originated for me three years ago, while working in the armored car industry. I had worked as an Armored Car Operative (those proud of the job referred to themselves as Currency Control Officers) for almost two years the morning that three of my colleagues brought the broken-down truck into the shop. The mottled gray machine, clad in a heavy layer of insects and grime, rolled in through the overhead door, a lumbering, intimidating vehicle that conveyed authority and gravity simultaneously.

Peter, an affiliate of the night crews that ran from 8:00 pm until 6:00 am, entered the shop that morning, looking slovenly and pale, a sickly ghostlike specter like all the men on the night shift. Halfheartedly tucking in his shirt, and running his fingers through his greasy, tangled mop of matted hair, he approached the manager with an innocent grin and explained his predicament. Apparently, sometime during the night, the truck had suffered an electrical failure, by no means an uncommon occurrence, the central security mechanism and its wiring bursting into flames. Soon thereafter it was discovered that the truck was inaccessible when not operational. This being as it may, when switched off, every automatic lock on board the truck snapped shut with lightning efficiency and nothing, anywhere, could be opened with any key. A conundrum presented itself: when the engine was running the truck could be accessed, it was noticed, yet upon shut down, not a door could be opened on the truck.

This of course presented a significant problem. It was evident that the truck was still loaded with hundreds of thousands of dollars; all the spoils of the sum of over five hundred bank night deposits still remained within the truck's confines. The boss, looking disgruntled and tired, gave his verdict after pondering the problem awhile.

“Bring the fucking thing in and unload it fast”. “You two over there”, said Dave, pointing to myself and some other unfortunate, “get your asses in there and help pull that cargo off as soon as they wheel it in”, he barked.

The truck rolled in like a freight train and halted abruptly as the garage door slammed shut behind it. Peter keyed open the back door, and we scrambled over, beginning the laborious process of unloading the mountains of individual plastic-wrapped money parcels. The truck’s heavy diesel engine resonated deeply in the close concrete quarters of the shop, a rhythmic base that we felt in our chests. We threw the bags with increasing rapidity. The shop began to fill with choking fumes, slowly at first, practically unnoticeable under the green fluorescent lights.

“Sweet Jesus”, whispered Peter, “It reeks in here!”

The edge of desperation was plain to be heard in his voice, and looking in Peter’s red-rimmed eyes I saw the panic building. We all simultaneously understood that the environment was swiftly becoming contaminated; each stroke of the idling Chicago Diesel’s heavy engine cycle steadily depleted what little clean air remained in the shop. At that moment it became clear to me just how volatile the exhaust really was, and I began to cough involuntarily, like some aged, retired coal miner, each small gulp of air wracking my body with convulsive paroxysms. The smell of sulfur, a waxy, resinous smell, burned in my sinuses as I increased tempo.

My eyes began to water, and I pulled my shirt collar up over my face. Peter jumped down and grabbed a nearby broom, returning to rake out heaps of packages from the truck in avalanches. We worked on, the five of us, unhearing, unaware of anything but the work, and our own rapidly failing respiration. The air had now taken on a ruddy brownish hue, and looking around I saw the rest of the building’s employees disappearing from the central garage area, running to the far recesses of the building with hands pressed over their mouths and noses. Obviously we didn’t have much time left before we would be thoroughly poisoned, but just then we reached the end of the pile.

“Get that goddamned truck outta here!”, roared Dave, the boss, who had stood impassively nearby the whole while observing our progress.

A button was pushed, and the garage door ratcheted up, as clean air came washing into the shop like a cool, pure river. The truck lurched away faster than it ought to have, the rear door careening wildly open and shut; the remaining three crewmen within the truck were visibly thrown around like string puppets, and a great deal of muffled cursing was heard. Those of us standing in the shop raced to the open door and gulped down the waves of cool oxygen rushing in. I heard someone retch nearby. Leaning on the garage doorframe, I looked over to see Peter’s slouched, disheveled figure walking over to me, a gun belt slung loosely over his shoulder and a wide grin on his pasty, besmirched face.

“Hey Dan”, he said to me with teary, exultant eyes, “I love the smell of diesel in the morning!”

A smile crept to my face as I laughed and said “Yeah...yeah me too”.

The Tragic Tale of Rudolph Diesel

Rudolph Diesel, championed by many as a “scientific genius and the James Watt of the 19th century” (Net, XVII), was the man most responsible for the creation of the Diesel engine. From “1893 to 1897 Diesel worked at the Augsburg Machine-Works” (Net, XVII) to develop a working prototype of the Diesel engine. It was his belief that a device is first invented, then developed, and finally improved. He held true to this model despite intense criticism from his peers and repeated failures. Between 1890 and 1893, “Diesel invented his engine using his vast knowledge of thermodynamics” (Net, XVII) and brought to fruition the concept that a crude fuel with low combustibility could be made useful and harnessed if burned slowly and at higher pressures. In 1912, 20 years after the engine was conceived, four books were written about its development. “Diesel wrote one, and the other three were written by engineers determined to minimize and debunk his claims” (Ibid, XVII).

In 1897, after years of exhaustive and unrecognized research, Rudolph Diesel brought forth the first viable functioning Diesel Engine. It was indeed a landmark juncture in history, one that certainly changed the world forever. It was Diesel’s belief that his newest prototype would become widely implemented within a year’s time, and thus he set about promoting it enthusiastically. From 1897 to 1908 Diesel busied himself with the sale of his life’s work, becoming a traveling salesman, a self-promoter and advertiser. His business, however, met with great difficulty in the marketplace, owing primarily to the fact that the engine itself was fraught with technical flaws. His invention was harshly criticized (it required, in fact, a further eleven years of development), and Diesel became disillusioned and uncertain of his invention. In a cloud of despair Diesel left his native Germany, boarding a boat to England. Ten days later his body was found floating in an ocean port. Rumors briefly circulated about Diesel’s ‘attempt to sell national secrets to the British’, but it became clear that Diesel had actually committed suicide (Net, XVII).

In what has certainly become one of the most tragic ironies of the modern age, Diesel’s masterpiece has today achieved global implementation and worldwide acceptance. It is the most widely used internal combustion engine (ICE) on the planet, “moving 94% of all freight” (Net, XV). Diesel engines are the World’s most efficient engines, used primarily in heavy-duty vehicles, exhibiting greater power at lower engine speeds than any gasoline-powered model. Today, companies like Volkswagen are producing what have come to be known as ‘Green Diesel Engines’. “Decreasing fuel consumption of the already efficient engines by 15%, Green Diesel innovation has introduced ‘direct injection technology’, in which fuel and air are pumped directly into cylinders” (Net, XVIII). The Volkswagen Lupo, the first Green Diesel vehicle, is the most fuel-efficient car in

the world, getting 90 MPG. Volkswagen expects “soon to produce a car capable of 190 MPG” (Net, XVIII).

ESSENCE OF DIESEL

Invented in 1890 by Rudolph Diesel (Net, XVII), the Diesel engine possesses one of the most distinctive and invigorating aromas of any industrial artifact. It is perhaps the most familiar and cherished fragrance of the modern world, immediately identifiable, unmistakably exquisite. No other scent so stimulates and invigorates the emotions as that of Diesel oil, conjuring sensations of limitless power and relentless force.

A yellow to dark brown oily liquid (also known as fuel oil #2) (Net, XV), the hydrocarbon-based Diesel fuel possesses a powerful and diffusive, but pleasant odor. The fuel produces a pleasingly irritating effect when introduced to the skin, assisting in the formation of rashes and psoriasis. When applied to the external derma of the body, Diesel fuel acts as a soothing solvent that penetrates directly into the bloodstream, producing a cooling sensation and eventually a relaxing numbness. The use of Diesel fuel in place of the more conventional isopropyl (rubbing) alcohol has become widely recognized as a remedy for sunburns, strained muscles and even arthritis (with similar healing properties as the world renowned WD-40).

Interestingly, *Diesel engines* are the world's most fuel-efficient internal-combustion engines. They are used particularly in heavy-duty engines, moving an astonishing 94% of all freight in the U.S.A (Net, XV). When in operation, the

Diesel engine produces two (2) uplifting scents, namely NO_x (oxides of **n**itrogen) which assist in creating low level ozone (smog) and PM **p**articulate **m**atter (the visible component of smoke) (Net, XV). The combination of these elements result in the strong, piercing and refreshingly scintillating smell we associate with Diesel-powered vehicles. The deep, smoky aroma of Diesel lies intrinsically linked with the element sulfur, (Net, XV) which acts as a lubricant for Diesel fuel injection pumps and an inhibitor to oxidation catalysts / catalytic particulate filters (thereby enhancing the power and potency of the scent). Also, Diesel engines characteristically burn small amounts of fossil (motor) oil in the combustion process. An inefficiently operating or cold Diesel engine is known to produce the most favorable results, bringing forth readily enjoyable quantities of fumes and smoke.

The essence of Diesel is effective for all levels of life, for the soul, spirit and body. Being a decidedly sharp oil, a total body massage with essence of Diesel may not be a good idea for those of gentle countenance or those disposed to allergy, yet is highly recommended for those of a mechanical disposition or futurist inclination. Not surprisingly, appreciation of the Essence of Diesel has grown dramatically over the past decade, the California Department of Transportation and Health projecting a 31% increase in Diesel fuel consumption by the year 2020 (Net, XVI). As the chasm between the machine and humanity diminishes, it is likely that The Essence of Diesel shall become ever more prolific

and omnipresent, becoming the smell most indicative of the modern world, indeed, of civilization itself.

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