EXTROPY

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Cover Illustrations: Front: "Arch-anarchy" by Tom W. Bell
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by Tom W. Bell

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EDITORIAL

This Issue: Anarchy and . . .

This issue of <u>Extropy</u> focuses on anarchy. By "anarchy" I do not mean chaos, but rather the absence of statist coercion. An anarchistic society actually promises to be *more orderly* than a statist one, because statism depends on the use of coercive force. Statist coercion disrupts society by distorting the prices that convey information in a free market, and by directly enslaving and killing innocent individuals. The easily visible order imposed by statist laws crushes the spontaneously evolved order embodied in market processes, customs, and voluntary associations. Statism thereby increases entropy and thus merits the enmity of all those who value freedom, peace, and extropy.

In "Arch-anarchy" A argues for the overthrow of *all* laws -- be they the laws of statists, moralists, nature, or logic -- that get in the way of his will. Or is that *her* will? *Its*? A's identity remains a mystery. I can assure you that I am not A. By the time you finish reading "Arch-anarchy" you will probably know who is, however.

Max T. O'Connor's engaging and sophisticated "Deep Anarchy" ranges from abstract metaphysics to practical advice for extropians stranded in a statist world. He concludes that we *already* live in anarchy, because "the State" does not really exist.

You will find a battle-cry for anarchy in "The Extropian Declaration," where Max and I announce the beginning of a revolution against ignorance, destruction, and death; a revolution we will fight with ideas and win in minds.

Max and I have also collected various anti-statism quotes, scattered throughout this issue under the heading, "Our Enemy, 'The State.'"

. . . More, More, More!!!

There is more to this issue than anarchy, however.

In "Forum" Dr. John Hospers and I hash it out over aesthetics.

Drawing on personal interviews of Stephan W. Hawking and Arthur C. Clarke, Gregory Benford offers an inspiring image of intelligence overcoming physical barriers in "Leaping the Abyss."

Fred Chamberlain reveals why he never wants to grow old in "I Am a Child."

As part of a continuing series of articles that project the future of computing in user-friendly terms, Simon D. Levy walks us through a working neural network in "Perceptrons."

In "On Competition and Species Loss" Max argues on behalf of both.

Rob Michels reviews Ronald K. Siegel's *Intoxication*, an expert examination of drug use among humans

and animals. Siegel explains that the love of drugs is a basic human drive, akin to eating or sex. It will thus resist all efforts at its elimination, the "War on drugs" notwithstanding.

Max and Simon provide bite-sized summaries of extropian technological advances in "Intelligence at Work."

If all of this extropianism leaves you hungering for more, turn to "Extropian Resources," where Max and I list a number of organizations and publications that fight entropy in one way or another.

Future Issues

In Extropy #5.5, the spring half-issue, Max will publish "The Extropian Principles," a concise statement of the extropianism's basic principles.

Having closed the door on statism in this issue, we will open the door to anarchistic societies in an upcoming issue. Max plans to write about spontaneous orders, while I will write about systems of privately-provided law.

In other areas, Simon will continue his series on the future of computation with an article on neurocomputation. Max plans to offer a review of "The Immortalist" and a description of the contrast between religion and reliberium. We also hope to have artices on the Singularity by Mark Potts and on the Far Edge Committee by Keith Henson. And we will continue with updated versions of "Intelligence at Work" and "Extropian Resources."

Further down the road, Max projects an issue devoted to personal identity, including uploading and personality mergers. We welcome articles

on this topic, and on on any extropian topic in general, including: artificial intelligence; cognitive science and neuroscience advances and possibilities; intelligence increase technologies; life extension, cryonics; biostasis, and immortalism in general; nanotechnology; hypermedia; spontaneous orders; space colonization; libertarian economics and politics; reviews of science fiction; intelligent use of psychochemicals; extropian self-improvement psychology; mindfucking and weirdness; extropic moral and amoral theories; exciting developments in science and technology; memetics; and aesthetics.

Corporate Shakeup!

A rash of corporate restructuring has struck Extropy Unltd.,™©®etc. manufacturer of vaccine for future shock. I will hand over the editorship *Extropy* magazine (a wholly owned subsidiary) to Max T. O'Connor with the next issue. Though I step down with great regret, I leave proud of my record. Marketing surveys show local decreases of entropy in hundreds of brains the world over. (To allow further such gloating, I will hang around as assistant editor.)

Max has already established himself as an energetic and capable extropologist. He plans to continue Extropy's success by publishing full issues twice yearly, in the summer and winter, with supplemental half-issues coming out each spring and fall. This clever strategy will allow him to cut production costs while still bringing you tons of fine reading.

Extropy welcomes Simon D. Levy, doctoral candidate in linguistics at the University of Connecticut, as our new

technical editor. Simon will keep us up-to-date on scientific advances likely to help in the battle against entropy and share the blame if we get caught.

Extropy Abroad

Chris Tame of England's Libertarian Alliance will reprint Max T. O'Connor's "In Praise of the Devil," originally printed in Extropy #3, in his organization's *Atheist Papers*.

Correction

Thanks go to Simon D. Levy for pointing out that page 37 of Extropy #4's "Efficient Aesthetics" should read: ". . . $B = O/I$ where B = the beauty of a work of art, O = the amount of information those who experience the art draw from it, and I = the costs they incur to so experience it." Thereafter, all references to I and O should be interchanged. (Alternatively, you could just postulate that $B = I/O$.)

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Forum

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Art and Communication

A Response to "Efficient Aesthetics"[1]
By Dr. John Hospers

I don't think art is primarily a conveyor-belt for information. Contrary to what Tom W. Bell says, *Gulliver's Travels* is not "esteemed as *art* because it hides subtle political satire." It would be valued just as highly if it contained no such overtones at all, as long as the writing were as memorable as it is now. If it is done with style and passion, it doesn't matter whether it is about some important theme or even whether it has any. Much of Thomas Wolfe is beautiful music, worth rolling over the tongue repeatedly. The same with the writings of Isak Dinesen, an impeccable stylist who wrote *Out of Africa*. Gustav Flaubert, author of a marvelously stylistic book,

Madame Bovary, said, "I would like to write a book about nothing," for only that on his view would be pure literature. Walter Pater, whose *Marius the Epicurean* is another example of pure style, wrote that "all art aspires to the condition of music" -- no knowledge, no information, just pure beauty, just gems to treasure over and over.

I am speaking of information in the ordinary sense, things we know from having been exposed to the work of art. Most of the things we know are aesthetically irrelevant -- e.g. that the symphony was composed by Brahms, that it is 41 minutes long. Practically everything we get out of it is not

knowledge. It is more like "richness of experience" -- *Erlebnis* rather than *Erkenntnis*.

Rather than saying art contains information, it would be better merely to say, as Bell also says, that it communicates something. "Artists aim to communicate their ideas to an audience." Most artists don't have many ideas (they're not philosophers, after all), and those they do have T.S. Eliot called "simple, crude, and flat." If you mean that the composer has musical ideas, i.e. musical themes, O.K. -- this is to extend the word "idea" to mean other things, not the usual cognitive sense of the word we regularly employ.

But let's take "communicate." "Good music," says Bell, "captures the state of mind of its composer." Baloney! Nobody knows what the state of mind is or was, and no one can compare his/her present experience with that of the composer to see if the formula holds. Anyway, there is no need for works of art to communicate anything, the composer's state of mind or something else. Communication, as I take it, at least involves something being transmitted from the mind of the artist to the mind of the consumer (hearer, viewer, reader); and this may not happen at all. It is popular to believe that a composer feels emotion A when he creates and that the audience that appreciates the composition also feels emotion A. But this is far from being generally true. Perhaps the listener doesn't feel emotion A (he can recognize the music as sad without feeling sad); or perhaps he feels quite a different emotion, B. And as long as experience B inspires him, what's wrong with that? If lots of listeners at lost of different times feel emotion B, even though nothing resembling this was in the mind of the

artist, they will feel that the emotion is somehow "in" the work, even that the artist has communicated it to them.

But the fact is that the audience would be enjoying the work, but not because anything (emotion or otherwise) was being communicated from the artist to the listener. The work of art is more like a seed planted by the artist, which is left to sprout in many different ways in many different minds. When John Donne in one of his "Elegies" wrote the thoughts of a woman whose husband had been killed crossing a mountain, "Thy soul hovers o'er the white alp alone," he meant the line to pulsate with horror, as indeed it did for Donne (mountains in the seventeenth century were viewed as dangers to life, barriers to traffic; one wouldn't dream of climbing them to enjoy them). But came the Romantic era, and in the 19th century mountain climbing became a sport, and the same words came to have a pleasurable, even romantic, ring.

Again, Shakespeare had not read Freud, and could not have commented on the Freudian interpretation of *Hamlet*, but many readers since Ernest Jones have been convinced that Hamlet had an oedipal motivation and that the Hamlet-problem -- why didn't Hamlet kill his uncle earlier -- is solved only on the assumption that the Freudian interpretation is correct. Thus the audience gets out of the work what the artist never put there, though perhaps he planted the seeds in such a way that the reader could at a later time, in a much different culture, fruitfully interpret the work of art in that way.

But don't say that art is the communication of the artist's feeling to an audience. You don't communicate anything, A, from artist to listener if there

wasn't anything in the artist's experience that got transferred to the audience's experience. This happens constantly in art. If we had to know the mind of the artist, art would be a closed book.

[1]Tom W. Bell, "Efficient Aesthetics," *Extropy*, 4 (Summer 1989) pp. 36-40.

<u>Reply</u>

By Tom W. Bell

I respectfully disagree with Dr. John Hospers that artists "constantly" fail to convey "anything" of their mental states to their audiences. Does anyone imagine that Picasso intended to paint *joy* in "Guernica"? That Rodin meant to sculpt *hate* in "The Kiss"? That Wagner sung of *resignation* in "The Flight of the Valkries"? Ridiculous. Artists routinely try to communicate their impressions to us. Great artists succeed.

But even if this were not true, my claims about aesthetics would still hold true. Recall that I said, "$B = O/I$, where B = the beauty of a work of art, O = the amount of information those who experience the art draw from it, and I = the costs they incur to so experience it." I make no mention of the artist's intentions. O measures the *amount* of information those who experience the artwork get from it, not the *content* of that information. Artists who communicate their ideas well *tend* to produce more beautiful art because they can ensure that their work delivers a certain level of information, but good communication does not guarantee good art. Beauty really is in the eye of the beholder.

In one respect, Hospers supports my theory of aesthetics. He stresses that our enjoyment of beautiful art leads us to seek it out again and again, describing aesthetic art as ". . . beautiful music, worth rolling over the tongue repeatedly," and ". . . just pure beauty, just gems to treasure over and over." As I explained in "Efficient Aesthetics," artists can increase the beauty of their work by making it irresistible: "who can't recall the opening bars of Beethoven's 'Symphony Number 5 in C Minor'? This is meme engineering at its best! One exposure and you're infected, becoming a carrier of 'Bum Bum Bum Bummmmm,' singing it aloud and infecting others. Clearly, such efficient music maximizes O/I ."

I had hoped to make my meaning clear through such examples, but it appears that I have been misunderstood. Perhaps my article was poorly written. At least I can take consolation in the fact that if reading "Efficient Aesthetics" stimulated Dr. Hospers to engage in fruitful reflection, then the article has *some* beauty -- regardless of its power to communicate my ideas.

Leaping the Abyss

By Gregory Benford

Stephen Hawking seemed slightly worse, as always. It is a miracle that he has clung to life for over twenty years with Lou Gerhig's disease. Each time I visit him I feel that it will be the last. His shrunken form lolled in his motorized chair, staring out, rendered somewhat goggle-eyed by his thick glasses -- but a strong spirit animates all he says, and you can sense the inner fire.

I was in Cambridge to film conversations with three astronomers for a Japanese National Television program. We'd had a good morning with Martin Rees, talking on the green outside the Institute for Astronomy, and after that a less successful interlude with Donald Lynden-Bell. After lunch at Kings' College with Martin I wandered through the atmospheric turns of the colleges and then met the Japanese camera crew for our final, longest shooting.

The Japanese had done exterior shots of him the day before, but Stephen had become leery of coverage of his personal life, and permitted no shots of his family. The enormous success of *A Brief History of Time* has made him a curious kind of cultural icon, and he himself wonders how many people, including starlets and rock singers, bought it as a gesture toward the infinite, and left it unread. He presented us with a short essay which answered in serial order the questions I had sent. Entering his office, I was struck that this man who had suffered such an agonizing decline in his physical abilities had posted several large posters on his walls of a person very nearly his opposite: Marilyn Monroe. I mentioned her and he responded instantly, tapping one-handed on his keyboard, so that his American-accented, transduced voice replied, "yes, she's wonderful."

For the first time in years I was nervous. I almost savored the experience; decades of university lecturing had leached away any self-consciousness in me, and this was nearly a fresh experience. I think Hawking's obvious preparation and his great politeness paradoxically put me ill at ease; I felt that I had somehow taken up more of his time than I thought justified. When he remarked that this was the last television interview he would do, and only because I was asking the questions, which he liked, I felt a humble, strangely thrilled sensation.

It went well. He likes the tug of the philosophical that runs through his work, and was willing to answer more questions than I'd sent. I watched him rapidly flit through the menu of often-used words on the liquid crystal display riding before him in his wheelchair. (only a few are names; "Coleman" in the C's suggested how often he refers to Sidney's work.)

His secretary quietly asked if I would join Stephen for dinner at Caius College, so after the TV shooting was over we made our way through misty twilight, student shouts echoing, his wheelchair bouncing over cobbled

streets. He insists on steering it himself, though his nurse hovers, as he must have round-the-clock care. He kept up a flow of conversation as well as anyone could through a keyboard. The dinner was noisy, with the year's new undergraduates staring at the famous Hawking. His nurse must chop up his food and spoon feed it to him, not a pleasant sight, since he has only slight control of his lips. But Stephen carries on in a matter-of-fact way. His only concession was to let himself be seated with his back to the students, so they could not see him being fed.

High table afterward was the traditional walnuts and port, Cuban cigars and somewhat arch conversation, occasionally skewered by an interjection from Stephen. When we left, Stephen guided his wheelchair through the shadowy reaches of the college, indulging my curiosity about a time-honored undergraduate sport: climbing Cambridge. At night young men scramble among the upper reaches of the steeply steepled old buildings, scaling the most difficult points for the glory of it. There is even a booklet describing the triumphs and centuries-long history. Stephen took me to a passageway I had been through many times, between high buildings. It looked to be about ten feet across. I couldn't imagine leaping that abyss from the slate-dark roofs. "All that distance?" I

asked. "Yes," he said. "Any miss?" "Yes." "Injured?" "Yes." "Killed?" His eyes twinkled and he gave us a broad smile. "Yes." These Cambridge sorts had the real stuff all right.

Passing through London, I spent a morning with Arthur Clarke. He had recovered nicely from his bout the year before with post-polio syndrome and was positively bouncy. He had fled his home in Sri Lanka, but was determined to go back after receiving the Commander of the British Empire from the queen. We were going to go out to a show together, but he proved a bit too tired in the evening. We spent most of our time discussing *Beyond the Fall of Night*, in which I attempted to follow his grand perspectives of *Against the Fall of Night*, written over forty years before. Throughout Arthur was quick, spontaneous, brimming with news.

Both of these men had faced physical constrictions with a renewed attack on the large issues, on great sweeps of space and time, struggling without much fuss against the narrowing that is perhaps the worst element of infirmity. Stephan rapt with Marilyn, Arthur showing off his latest laptop computer -- both seemed still deeply engaged with life, holding against the tides of entropy. I had learned a good deal from these few days, I realized, and most of it not at all about astronomy.

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Our Enemy, "The State"

William Godwin: "With what delight must every well-informed friend of mankind look forward to the auspicious period, the dissolution of political government, of that brute engine, which has been the only perennial cause of the vices of men." (*Enquiry Concerning Political Justice*)

Arch-anarchy[1]

By A

A Call to Arms

Down with the law of gravity!

By what right does it counter my will? I have not pledged my allegiance to the law of gravity; I have learned to live under its force as one learns to live under a tyrant. Whatever gravity's benefits, I want the freedom to deny its iron hand. Yet gravity reigns despite my complaints. "No gravitation without representation!" I shout. "Down with the law of gravity!"

Down with *all* of nature's laws!

Gravity, the electromagnetic force, the strong and weak nuclear forces -- together they conspire to destroy human intelligence. Their evil leader? Entropy. Throw out the Four Forces! Down with Entropy!

Down with *every* limitation!

I call for the highest of all freedoms. Come, let us cast off *all* chains! We will make our own heaven. We will become our own gods.

I call for perfect self-rule; I call for arch-anarchy!

What is Arch-anarchy?

Arch-anarchy is the highest form of anarchy.[2] Plain anarchists deny the validity of the State's laws. But why stop there? As an *arch*-anarchist, I deny the validity of *every* law -- human or otherwise -- that gets in the way of my will.

Anarchism comes in many flavors, but eventually they all boil down to arch-anarchy.[3] Arch-anarchy follows directly from *individualist* anarchism, the sort of anarchism that places the individual will before the commands of statists.[4] All other forms of anarchism in turn reduce to individualist anarchism. Why? Because *individuals* make choices, not groups. So whatever form of society an anarchist proposes, he must convince other individuals to accept it. If he fails and tries to *force* his version of utopia on them, he becomes just another statist. All anarchists must face up to this fact; individualist anarchists not only admit it, they *embrace* it. And as I will demonstrate, once you admit the supremacy of the individual will you must move on to arch-anarchy. Why accept anything less?

Reality Explained

As an arch-anarchist, I divide the universe into two opposing forces: my will and obstacles to my will. And I have one goal in life: that the former shall overcome the latter.

The graph below sums up this world-view neatly. Axes charting the will and its obstacles cross at right angles. Because one can will nothing or everything, and because one can face no obstacles or countless obstacles, the values of these two axes run from zero to

positive infinity. At one extreme lies arch-anarchy: the point at which the will encounters no obstacles at all. At the other extreme lies death: the point where obstacles to the will completely overcome it.

$$W \cdot O = B$$

where
W = Will,
O = Obstacles, and
B = Best limited world.

The Arch-anarchist graph of reality

You can will whatever you want, but usually you can realize only part of it. If you aim high and hope for more than you can achieve, then you reach into the realm of fantasy. If you aim low and accept less than you could possibly accomplish, then you sink into the realm of submission. On the graph of reality, the realm of fantasy occupies the area outside of the long curve sweeping down from arch-anarchy and over to death. The realm of submission falls inside this line.

The line itself marks the range of best limited worlds. A best limited world is a world in which, given certain obstacles, the will realizes its wishes to the greatest possible extent. For example, I can only achieve so much in the U.S. at present. I can travel pretty freely and buy a nice computer, but I can't fly faster than light or interface with a Cray. Such wild hopes carry my will above the point on the graph marked "U.S. at present," into the realm of fantasy.

On the other hand, many people not only fail to dream of a better world, they fail to even take advantage of the world they already live in. Some

unquestionably accept outmoded beliefs. Some hide in their rooms. Some commit suicide. All of these people fall below the curve of best possible worlds into the realm of submission.

Personally, I like to push the limits of the possible, so I live right on the curve of best limited worlds.

Where are you on the graph of reality?

Why Fight It?

More importantly, where do you *want* to be?

I want to escape the U.S. at present, pass through minimal statism, and soar beyond even anarcho-capitalism. I want the perfect and absolute freedom of arch-anarchy. I want to become a *god*.

I welcome you to come along. Regardless of all my talk about wanting what *I* will, I want the same thing for my friends. When I talk about *my* self-interest, I do not mean only the interests of this particular body and brain. I am no more than a particular pattern of information, a set of data and processing rules. To the extent that I share this pattern with others, we share personal identities.

Given the advantages of my subjective point of view, it is almost always in my self-interest to preserve my body and brain.[5] But if I were forced to choose between the preservation of the information now stored in my brain and that in the brains of all of my immortalist, libertarian, extropian friends, I would best serve "my" (our) self-interest by saving "them" (us). So although I speak of *my* will, I use the term broadly. Should others ever join me in my quest for arch-anarchy, I will not fight with

them over the spoils of heaven; there ought to be plenty of bliss to go around. Rather, I will embrace them as my kin, for all arch-anarchists share the love of life and the thirst for freedom.

But if you don't want to join me in utopia, that's your business. If godhood doesn't appeal to you, then you aren't much like me anyhow and it probably isn't in my self-interest to drag you into heaven. Perfect freedom is not an objective Good that every moral being must crave.[6] There are no objective moral values. There is only the will and its obstacles. If you give in to entropy you won't be Wrong -- you'll be Dead.

Because I speak only of freeing my will from all obstacles, political theorists might decry my mixing negative and positive freedoms. I do recognize the distinction, however. I agree with libertarians that so long as we remain political animals, we should only seek freedom *from* others' coercion -- not freedom *to* others' property. Notice the caveat, though: *so long as we remain political animals*. We currently live in a Hobbesian world of scarce goods, conflicting ends, and mutual threats. We libertarians mutually agree to enforce only negative rights because they give us the the best limited world at present.

This could change, however. Technology may bring us unlimited goods, or we may find the means to merge our personalities into one being seeking one end, or we may devise a defense effective against all personal threats. If so, we could give up the distinction between negative and positive freedoms and get back to the reason we favored one over the other in the first place: to maximize freedom *qua* freedom.

Know Your Enemy

"Ok, I'm convinced that I should try to free my will from all obstacles," you might say. "But how can we possibly overthrow the laws of nature? Aren't they beyond all human control?"

We arch-anarchists wage a war against everything that stands between us and godhood. Let us therefore heed Sun Tzu's advice: Know your enemy. A critical scrutiny of natural laws shows that they have far less power than people typically assume.

People often idolize natural laws as immutable dictates that order the universe and set the ultimate limits of human ambition. This view is particularly popular among those who cannot stomach religion, yet who still secretly hunger for *some* sort of God. By worshiping the laws of nature, they can surrender their wills without embarrassing themselves in front of their scientifically correct peers.[7]

Perhaps such people confuse natural laws with statists' laws. We break statist laws only at the risk of suffering at the hands of those who claim to act in the name of the State. But natural laws are not the laws in the conventional sense of word. No legislature wrote them, no executive enforces them, and no judiciary interprets them. We need not fear that if we break a natural law we will suffer the wrath of the "state of nature."

So what *are* natural laws? No more than observed constants. They tell us not how the universe *must* behave, but only how it has been observed to behave by certain scientists in certain labs at certain times under certain conditions. We have absolutely no guarantee that the rules will not change tomorrow. We have only faith.

But faith is not enough. The laws of nature are weaker than people usually suppose. Astronomers once thought that the sun circled the earth in accord with the laws of nature. They were wrong. Physicists used to think that objects burned thanks to phlogiston. They were wrong, too. Chemists claimed that atoms were indivisible. Wrong again. Given the track record of science to date, it doesn't take a radical empiricist to suspect the durability of what we currently take to be the laws of nature.

Even if we had complete confidence in our scientists, the laws of nature would fail to inspire much confidence. According to the classical theory of general relativity, the universe occupied a point of infinite density and infinite space-time curvature at the start of its "big bang." It will return to this condition should it undergo a "big crunch." As Stephan Hawkings notes, "All the known laws of science would break down at such a point."[8]

All these points demonstrate that the laws of nature fail to merit our awe. They are not inviolable edicts from God. They are only statistical generalizations about recent scientific observations. We have broken natural laws before and we can break them again.[9] The important point is to *want* to control the laws of nature. The rest is mere technical details. Where there's a will. . . .[10]

Taking Arch-anarchy to its Illogical Extreme

Control of the laws of nature would give us the power to fly in defiance of gravity, live forever, and create our own universes. We would become gods. But that's not enough.

Mastery of the laws of nature won't enable me to realize *everything* I will, for I want to become more than a mere god. I want to become God, omniscient and omnipotent.[11]

This poses a problem, however: an omniscient God knows *everything*, including the course of Its own will; an omnipotent God can do *anything*, including changing Its mind. Omniscience and omnipotence thus contradict one another. Traditionally, theologicians have saved face by claiming that God transcends contradiction. If that is what it takes to become a God, so be it: Down with the law of non-contradiction!

In Defense of Contradiction

Western philosophers love to kick contradiction around. They portray it as the bane of logic, the fatal flaw to any argument. Why has contradiction gotten such a bad name? The problem is that if you allow a contradiction into your train of thought then anything else follows -- including the converse of what you are trying to prove.[12] Once started, contradiction spreads like wildfire, consuming all truths. Western philosophers have therefore adopted the non-contradiction principle as one of the so-called "laws of thought": Not both A and not-A.[13]

But the non-contradiction principle deserves even less respect than the laws of nature. The downfall of the laws of nature will come only with technological advancements. I can disprove the the law of non-contradiction *right now*, however. What's more, I will do so on western philosophy's own terms.[14]

Metaphysicians have long held that no effect can be more real than its cause. Descartes, for example, explains that

> . . . there must at least be as much reality in the efficient and total cause as in its effect. For, pray, whence can the effect derive its reality, if not from its cause? . . . And from this it follows, not only that something cannot proceed from nothing, but likewise that what is more perfect -- that is to say, which has more reality within itself -- cannot proceed from the less perfect.[15]

Let us compare the principles of contradiction and non-contradiction on these grounds. We can easily generate the principle of non-contradiction from the principle of contradiction.[16] After all, we can generate *anything* from a contradiction. If we start with only the principle of non-contradiction, however, we're stuck with it. It lacks the power to generate the contradiction principle -- instead, it explicitly denies it.

Applying Descarte's criteria, I therefore conclude that the principle of contradiction is ontologically prior to the principle of non-contradiction -- i.e., rather than being *impossible*, contradiction is *more real* and *more perfect* than non-contradiction.

The Logical and Theological Considerations

Arch-anarchy demands the overthrow of the non-contradiction principle, for only then can the will be free of *all* obstacles, be they statist,

moral, natural, or logical. What would such perfect freedom feel like? Like being God, for only God has the power to realize *whatever* It wills.

And how does Godhood feel? Theology offers proofs that God is perfect, omniscient, omnipotent, and omnipresent. From our currently limited perspectives, we find it hard to imagine possessing such great powers.[17] We can, however, deduce some of God's other traits from this list of qualities.

God is not an old Caucasian male with a long beard and a deep voice (that's Santa Claus). God's capacities will not fit within a human form -- hence my referring to God as "It", rather than "He" or "She". Even "It" serves as inexact shorthand, however, for God transcends *all* forms.

Because omnipotence excludes competition, there is only one God. Hence my saying "God" rather than "Gods". All arch-anarchists aim at the same end, and those of us who reach it will merge into one being: God.

Because God is perfectly free, It escapes the reach of moral rules. Kant explains that morals apply only to imperfect wills, which need help overcoming weakness and ignorance. By merit of its inherent perfection, however, "no imperatives hold for the divine will."[18]

By now these theological considerations probably have my anti-religious readers chaffing. Note that theology need not entail religion, however. Arch-anarchists practice *reliberium*, not religion. "Religion" comes from the Latin roots *re*, or "again" and *ligare*, or "to bind". Religion thus aims "to bind again" to God those who have escaped the grip of the church. Arch-anarchists cannot but take offense to such an idea. We thus shun religion for "reliberion" (from *re* plus *liber*), because we seek to *free* our wills from all the binds to which they have been subjected.

By the same token, I will gladly give up "God" if you prefer less loaded terms. Do you prefer "The Tao"? Fine. Robert Nozick favors "Ein Sof". Call it what you will, we need the ultimate end of escaping all limitations to give meaning to our lives.[19] Nozick explains:

> The problem of meaning is created by limits. We cope with this by, in little ways or big, transcending these limits. Yet whatever extent we thereby reach in a wider realm also has its own limits -- the same problem surfaces again. This suggests that the problem can be avoided or transcended only by something without limits, only by something that cannot be stood outside of, even in imagination. . . something that somehow includes all possibilities, all possible universes, and excludes nothing. This something not only is not limited to some portion of actuality while excluding the rest, it also is not limited to that one portion of possibility which is (all of) actuality. It encompasses all. For this unlimited, we shall also use the Hebrew term *Ein Sof* (meaning without end or limit).[20]

We now have some idea of what to expect if we succeed in achieving arch-anarchy's goal of a will without limits. Let us finish with a harder question: Is it possible to achieve that goal? To put it another way, can God exist?

In one respect the question cannot be answered. As Nozick explains, "Terms demarcate things from other things, and so describe limits and boundaries. If Ein Sof was one way and also another, it would not be limited; also, it would not be describable by terms of the sort we use. The unlimited is ineffable."[21] Because "existence" and "non-existence" are limiting terms we cannot apply them to God (or the Tao, or Ein Sof), which transcends all contradictions -- including that of existence and non-existence. So when asked, "Can God exist?" we must answer, "Yes (and no)."

But although this response may be semantically correct, if fails to satisfy those of us who seek to become God. Granted that God may both exist and not-exist; we arch-anarchists want to know whether or not we could ever become powerful enough to embody such a contradiction. As I have argued throughout this essay, nothing prevents our doing so. Neither the laws of nature nor the principle of non-contradiction block the road to God. We need only time, wisdom, and luck. To this version of the question "Can God exist?" I therefore reply, "Why not?"

I have asked "*Can* God exist?" -- not the popular question "*Does* God exist?" -- because I do not envision God as our creator but rather as something that we will create. I note, however, that God *does* exist if and only if God *will* exist. Once we create God It will transcend the barriers of time, moving backwards through the years to exist *now*. God's omnipresence runs across *all* dimensions. This raises the possibility that we might now worship the God that we will later become. I suspect, however, that we would be better off keeping our prayers to ourselves.

Conclusion

I have argued for the most radical form of anarchy: *arch*-anarchy. As an arch-anarchist, I refuse to recognize the validity of any obstacle to my will. Is this selfish? Yes, but because I take a broad view of personal identity I am willing to consider others' interests along with my own. I therefore invite you to join me in my fight for perfect freedom. Together we will cast down the laws of statists, moralists, nature, and logic. Our ultimate goal: the singular, perfect, omnipotent power of God. Imagine the heights that we might achieve. . . .

We stand alone before the gates of heaven. Below us lie the smouldering husks of every law that ever blocked our way, their claims to validity consumed in arch-anarchism's critical inferno. Only our wills and the road to Godhood have survived. Having struggled up that long road on our own feet, we do not now fall on our bellies and plead to be admitted into heaven. Instead, we storm its gates! They open to reveal an empty city, and in that city an empty castle, and in that castle an empty throne, waiting for one who dares to assume the reign of God. We bravely mount the dais of the throne, and together pass beyond the realm of words.

Notes

and critical eye, and from the peripatetic company I found at Dave Pizer's 1989 Summer Cryonics retreat.

[2]"Anarchy" comes from the ancient Greek word *anarchos*, a word formed from *an* (= "without") plus *archos* (= "ruler"). But *archos* also means "main" or "principle." By tacking it onto the front of "anarchy," we get "arch-anarchy": the principle against principles. This contradiction suits the term well, for I take anarchism to its logical extreme and beyond, to its *il*logical one.

[3]One possible ordering of types of anarchisms ranges them the least to the most individualist, beginning with the French anarcho-syndicalists who denied even personal property and running on past Kropotkin's communist anarchism to Bakunin's collectivist anarchism, then to Proudon's mutualism, ending at the individualist anarchism of Godwin and Stirner. Anarcho-capitalism like Friedman's could fall anywhere along this spectrum, though Rothbard's version favors the individualist end. Tolstoy's pacifist anarchism floats somewhere off the spectrum.

[4] Among individual anarchists, Max Stirner comes closest to arch-anarchy: "Away, then, with every concern that is not altogether my concern! You think at least the 'good cause' must be my concern? What's good, what's bad? Why, I myself am my concern, and I am neither good nor bad. Neither has meaning for me." *The Ego and His Own*, translated by Steven T. Byington (New York: Libertarian Book Club, 1963) p. 5.

[5]Thus I have recently signed up with Alcor to ensure the cryogenic preservation of my brain, should my body give out.

[6]For a ethical system completely compatible with these views, see Tom W. Bell, "Wisdomism" Extropy No. 2 (Winter 1989) pp. 22-28.

[7]Voluntary submission to perceived natural laws has a long and rich history. The pre-Socractic Greek naturalists began the deceit. Aristotle continued the tradition by seeking the human good in the fulfillment of human nature. The Stoics saw natural law as an expression of God's will. St. Aquinas grafted Christian doctrines directly onto the framework of Aristotle's moral philosophy. Spinoza went so far as to equate nature with God. This theological approach to natural law lingers on in modern science.

All of these doctrines make the mistake of submitting the will to the dictates of nature, but some are worse than others. If technology cannot provide any outs, Aristotle offers realistic advice on moral self-management and Stoicism provides cold comforts. But when the deification of nature goes too far it can render great minds weak. Witness how Einstein's doctrine that "God does

not play dice with the universe" shut him out of the quantum revolution.

[8]Stephan W. Hawking, *A Brief History of Time* (New York: Bantam Books, 1988) p. 133.

[9]"Japanese scientists have reported that small gyroscopes lose weight when spun under certain conditions, apparently in defiance of gravity. . . . If substantiated by further tests, the finding could have a profound influence on physics and the study of the universe, and perhaps in the making of practical anti-gravity devices." The Kansas City Times, Thursday December 28, 1989, C-10. The results of the two scientists, Hideo Hayasaka and Sakae Takeuchi of Tohoku University, were originally reported in the December 18 issue of *Physical Review Letters*.

[10]In "Fragment of Nature" Goethe claimed that "The most unnatural also is nature. . . even in resisting her laws one obeys them; and one works with her even in desiring to work against her." Following Goethe, skeptics might claim that because the laws of nature describe phenomena, rather than dictate it, one can never violate them. To put it another way, one never breaks a law of nature; one merely creates a new law.

But I want to realize *whatever* I will, even if each new act breaks all previous laws of nature. It stretches the meaning of the word "law" beyond recognition to claim that under such circumstances I still follow the laws of nature. In any case, the Goethe objection concerns mere semantics. And so long as I can do what I please, I don't care what others call it.

[11]Strictly speaking, I am only after omnipotence. Omniscience quickly follows, however, if we consider knowledge as power. And in any case, omnipotence alone generates contradiction. God could, for example, bring together an unstoppable force and an immovable object.

[12] As proof of this claim consider the following derivation, where I assume a contradiction and end up establishing the truth of a random sentence:

1)	A &~A	Given
2)	~B	Hypothetical assumption
3)	~A	From 1 by conjunction elimination
4)	~B -> ~A	From 2 and 3 by conditional proof (discharging 2)
5)	A	From 1 by conjunction elimination
6)	B	From 4 and 5 by *modus tollens*

Beginning at 1 with a contradiction, we end up proving a totally unrelated statement at 6. If I stood for "It is raining and it is not raining," for example, 6 could stand for "Apples are blue." This shows that we can derive *anything* from a contradiction.

¹³ Symbolically: ~(A & ~A). The other "laws of thought" are the law of identity: A equals A, i.e. A=A; and the law of the excluded middle: Either A or not-A, i.e. (A v ~A). This set of laws has no particular status within symbolic logic, however.

¹⁴I am not the first to defend contradiction. Zen Buddhists have long advocated it in their obscure koans. Such riddles fail to impress most Westerners, however.

¹⁵Reneé Descartes, "Meditations On First Philosophy, Part 3," in *The Philosophical Works of Descartes*, Vol. I, trans. by Elizabeth S. Haldane and G.R.T. Ross (Cambridge: Cambridge University Press, 1967) p. 162.

¹⁶ This can be seen by imagining that B in the footnote 9's proof equals ~(C & ~C) -- thus showing that we can derive the law of non-contradiction from a contradiction. Or, to put it another way, if we begin with the principle of contradiction, A &~A, and reflexively substitute this same sentence for A, we get (A & ~A) & ~(A & ~A) -- thus showing that we get both the principle of contradiction *and* the principle of non-contradiction.

¹⁷ This ignorance by no means precludes our desiring Godhood; even as a virgin I knew that I would enjoy sex.

¹⁸ Kant would of course disagree with most of the rest of my conclusions. Immanuel Kant, *Foundations of the Metaphysics of Morals*, translated by Lewis White Beck (Bobbs-Merril Educational Publishing: Indianapolis, Indiana, 1959; originally written in 1785) p. 30.

¹⁹Straussians take note: an arch-anarchist confronts the cold, infinite and cruel universe without blinking and offers her fellow humans hope, rather than comforting (but deadly) lies.

²⁰Robert Nozick, "Philosophical Explanations," (Cambridge, Massachusetts: The Belknap Press of Harvard University Press, 1981) pp. 599-600.

²¹Ibid., p. 608.

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Our Enemy, "The State"

P.J. Proudhon: "To be GOVERNED is to be watched, inspected, spied upon, directed, law-driven, numbered, regulated, enrolled, indoctrinated, preached at, controlled, checked, estimated, valued, censured, commanded, by creatures who have neither the right nor the wisdom nor the virtue to do so. To be GOVERNED is to be at every operation, at every transaction noted, registered, counted, taxed, stamped, measured, numbered, assessed, licensed, authorized, admonished, prevented, forbidden, reformed, corrected, punished. It is, under pretext of public utility, and in the name of the general interest, to be placed under contribution, drilled, fleeced, exploited, monopolized, extorted from, squeezed, hoaxed, robbed; then, at the slightest resistance, the first word of complaint, to be repressed, fined, vilified, harassed, hunted down, abused, clubbed, disarmed, bound, choked, imprisoned, judged, condemned, shot, deported, sacrificed, sold, betrayed; and to crown all, mocked, ridiculed, derided, outraged, dishonored. That is government; that is its justice; that is its morality." (*General Idea of the Revolution in the Nineteenth Century*, trans. John Beverly Robinson [London: Freedom Press, 1923] pp.293-294)

Franz Oppenheimer: "The moment when first the conqueror spared his victim in order permanently to exploit him in productive work, was of incomparable historical importance. It gave birth to nation and state, . . ." (*The State*, trans. John M. Gitterman [New York: Free Life Editions, 1975] p. 27)

DEEP ANARCHY

An Eliminativist View of "The State"

By Max T. O'Connor

1: Introduction

Two of the fundamental extropian values are responsibility for one's own life and actions, and the determination to do away with constraints on one's rational will.[1] I believe that the institutions of religion and "the State"[2] are antithetical to these values. I took aim at the dominant Western religion in the last issue and will be dissecting that entropic force again in future. The purpose of this article is to destroy a powerful barrier which stands in the way of personal responsibility and freedom.

Extropians tend towards libertarian politics and a suspicion of the "State". Many call themselves anarchists, holding that "States" are inherently coercive and should be replaced with voluntary institutions to protect rights and perform other necessary functions.[3] Those who already think of themselves as anarchists are likely to be most sympathetic to my thesis, though the deep anarchy idea goes beyond traditional anarchism, whether of the free market or communalist type.

Traditional anarchists want to abolish the "State". In planning their strategies and in doing their thinking about this they rarely question the existence or fundamental nature of their enemy. This situation wouldn't be so bad if it wasn't for the fact that their mistaken beliefs often lead them into counterproductive political strategies.

Thus we observe the ludicrous sight of self-named anarchists joining political parties (usually the Libertarian Party) in order to hasten the end of the system. The idea seems to be: We can remove it by being absorbed by it![4]

I want to suggest that when we talk of "the State" we are not talking of any entity, either concrete or abstract. I will provide two main arguments for this: One from considerations of methodological individualism, and another that could be called "the argument from fuzziness". "Deep Anarchy" is the view that results from these thoughts; it is the idea that we <u>already</u> live in an anarchy.

2: What is it to Exist?

In order to keep this article to manageable length I will not attempt to provide a complete ontological theory (a theory of what exists). I will only examine the conditions for the existence of complex objects and organisms. I will ignore issues of the existence of numbers, sets, relations, concepts, consciousness, and so on. I will assume that readers accept that complex entities such as tables and humans exist. What about collections of objects? Is a collection also an object? If we wish to accept as objects all the things we normally accept as objects, then it cannot in general be an objection to the

objecthood of a thing that it is composed of parts which are themselves objects or individuals:

Case 1: An eagle is a thing, an object, even though it is composed of many parts such as limbs, organs, feathers, and so on. These parts can be further broken down into sub-parts such as cells, and further into organelles, molecules, atoms, and sub-atomic particles (or fields).

All objects are reducible to collections of more basic individuals except for the fundamental particles or fields, so we face the alternatives of (a) asserting, contrary to all normal usage, that the only really existing things are the sub-atomic particles, or (b) accepting that being a collection of more basic objects cannot, in itself, be a reason for denying the reality of a thing. I take it that everyone will agree that common usage, and the requirements of sanity and workability require us to take the second option. But is _any_ collection of objects itself necessarily an object?

Case 2: Imagine that I have a bag of marbles, each of which we grant is an object. I scatter the marbles on the floor randomly. Now it is quite possible for me to refer to the collection of marbles as a whole rather than to each of the individual marbles. If I'm eccentric I might even give the collection a name such as "Gertrude". By using the name Gertrude I can them simply refer to the collection of marbles without having to point to or mention any of the marbles individually. Does this mean that we should say Gertrude exists, or that Gertrude is an individual, an object? This is far less plausible than in the case of an eagle.

Consider Case 3: On my desk I have a computer, a glass, a business card, and a sheet of paper with a note scribbled on it. I can now talk about the collection of objects on my desk. The collection is picked out simply by my listing the objects that constitute the collection. Again, if I'm eccentric I might name the collection "Jeremiah". Should we say that Jeremiah is an individual, an object?

If we answer in the affirmative we should also say that Jeremiah exists. Surely Jeremiah does not exist. There is no object here; there is only a _mere_ collection of objects. By pointing to the objects in turn and then telling you that I'm going to refer to the collection as "Jeremiah" I am just giving the impression of unity and objecthood where there is none. The "components" of Jeremiah are not linked or causally related to each other in any way except one - my arbitrary act of _calling_ them an individual with the name "Jeremiah". I might just as easily have given the name "Jeremiah" to the conjunction of the glass and computer only. There is nothing special about the group of four objects which I actually named Jeremiah. If a human act of naming random collections were enough to constitute an object then the number of objects in the universe would be arbitrary, indeterminate and limitless.

Why is the first case clearly one of a collection constituting a higher-level object (or meta-object) whereas the second and third cases are examples of collections which we would not say constitute a meta-object? The answer to this will determine what we should say about "States". My suggestion is this:

Functional Integrity Thesis: In the case of the existence of objects, what determines whether a collection of objects is itself an object is the degree of

functional integrity possessed by the collection.

Secondary Thesis: (a) For each (kind of) object, there is a lower limit of functional integrity below which a collection will not constitute an object.

(b) Where that limit is will vary depending on the kind of object under consideration.

An object exists when its parts possess a sufficient degree of functional integrity. Alternatively, we can say that an object exists when it possesses the requisite properties of an object of that type. This is equivalent to the previous definition: Properties will only exist where there is a sufficient degree of functional integrity. The existence of an object can therefore be thought of as requiring a second-order functional integrity -- sufficient functional integrity of properties (or parts), each of which must have a sufficient degree of integrity.

The three examples given above, and many others that could be given, are a major motivating factor behind the Functional Integrity Thesis. The collection of objects on my desk is a mere collection. Nothing makes them into a collection or set apart from the bare fact of my having arbitrarily put them into a group. The collection or group has no existence apart from my specification. My referring to the separate objects by means of a name is not sufficient (or necessary) to make them into a genuine object. Collections formed by fiat are not thereby objects. Such collections are not things; we can rightly say that such collections do not exist. By saying this we are not denying that, in the situation at hand, there is something more than the four objects; there is also an act of grouping or

of collective reference, but that is all. This act cannot constitute a new object.[5] I might point in the direction of the eagle and list the eagle's parts: it's wings, lungs, eyes, liver, etc. I then assert that the collection of parts constitutes an object, a thing. That object is an eagle. Now, though, the individuality of the eagle is not constituted by my act of referring collectively to the group of the eagle-parts. The eagle exists independently of my acts of grouping and referring. There is an objective grouping of parts such that there is a higher-level object in existence.

The Functional Integrity Thesis claims that what makes the difference, what gives the collection of eagle-parts an independent existence, is the functional integrity of the collection. There are various very specific and specifiable causal interrelations between the parts. The internal parts of the organism are causally related in a more intimate and systematic manner than the relation of the parts to the environment. There is no rigid separation of organism from environment since air, food and drink are incorporated into the body from the surroundings. Yet the organism is clearly distinguished from its environment by the tightness of its internal organization and by the causal history of its constituent parts. For the eagle to exist the organs must function in a coordinated manner and the skeletal and muscular systems must be appropriately linked up with the rest of the assembly. If the eagle gets torn into pieces we say that the eagle no longer exists. Only its parts continue to exist.

The first part of the Secondary Thesis requires more comment than I have space for, but a brief explanation must suffice. It might be thought that objects exist more-or-less, that there is no

way of saying when an object is sufficiently integrated to exist. The idea would be that functional integrity is a matter of degree and so we should hold existence to be graded into degrees.

Certainly functional integrity is a matter of degree, and there will be borderline cases where, even given all the facts, we will have to underline what to say. However, the existence of borderline cases does not show that there are no clear cases of existence and non-existence. The fact of twilight does not mean there is no night or day.[6] Higher level properties and objects may not arise at an instantaneous point, but conceptual clarity and communication will mean that the extension of a concept is limited. Cognitive systems such as the human brain are well built to handle fuzzy boundaries while being able to categorize the world usefully.[7]

The second part of the Secondary Thesis contends that the minimum degree of functional integrity necessary for a collection to constitute an object depends on the kind of object at issue. Living organisms tolerate less loss of functional integrity before they cease to exist than some other objects. Objects like clouds and oceans can exist with a rather low degree of integrity. Unlike living creatures (or works of art, or even buildings), oceans and clouds don't require any very specific arrangement of their constituent parts; a loose conglomeration will suffice. Some limits do have to be imposed however. If the parts of a cloud are too separated they no longer form a cloud, though they may form more than one cloud.

For me to be a human, rather than a collection of flesh or a dead body, very many conditions of bodily integrity must be satisfied. My organs must be in the right place, connected up properly, and their parts must be precisely arranged. Integrity is required right down to the level of the cells and their molecular components, otherwise I am not a living human. In deciding on the degree to which something exists, then, we must take account of the kind of thing that it is. Things of the same kind require the same degree of functional integrity of their parts.

3: Argument From Fuzziness

I am now ready to apply these general ontological theses to the case of "the State". Applying the Functional Integrity Thesis (FIT) to perceivable physical objects such as tables, chairs, condoms and cars, is a simple enough matter. Even in those cases we have to take care to identify exactly the kind of object we are looking for, in order that we can correctly determine the degree of integrity needed for a collection to constitute that object. Unfortunately, applying the FIT to objects of a different order is more difficult. Some purported objects that we need to consider are "States", corporations, clubs, and societies.

Where is "the State" to be found? I've never seen one and I don't think anyone else has either. What I do find is a large number of people who claim to be "politicians, "policemen," "tax-collectors," "federal agents," "judges," "government workers," and so on. I also come across buildings and collections of individual human beings which I am told are "the Department of . . . ," "Congress," "The White House," "The Supreme Court," "the IRS," etc. Amongst all these people, buildings,

guns, pieces of paper, and assorted equipment I cannot find a "State".

Of course "the State" is supposed to be the collection of these things. But now I have two problems: First, exactly which people and things are to be included in the collection that supposedly constitutes a "State"? Second, how can a "State" act, have responsibility, or authority, if it is a collection whose parts (persons) themselves have these qualities? The second of these problems will be discussed in the section "The Argument from Methodological Individualism."

If the "State" is to exist, if it is to be a thing, it must be (a) a clearly identifiable collection of parts, and (b) a collection which exhibits a high enough degree of functional integrity. Neither of these conditions are fulfilled. Max Weber offers the most helpful definition of a "State". Essentially this comes down to saying that a "State" is a monopoly on the legitimate use of force in a geographical area. Each element of this definition is necessary. If no force were involved then "it" would be merely a voluntary organization. "Governments" or "states" have to use force or coercion in order to finance themselves - the system of taxation-extortion common to all governments.

Even more essential is the idea of a monopoly, since someone could argue that it is at least conceivable that a "government" be financed entirely by voluntary contributions, even if this has never happened (and almost certainly never would happen). Yet, if the "State" is not a monopoly then it just cannot be a "State". The deepest and most essential function of such an institution is that it decides what laws there are and enforces them. No one else has the right to do this,

except and to the degree that the "State" grants this right (a right which it retains the power and authority to remove). The idea of legitimacy comes in here; only "the State" may rightfully make decisions about laws and allowable coercion. [8]

Furthermore, I ask: who or what is supposed to hold the monopoly of power? I suggest that this is simply a myth. As will be argued in the next section, the wielders of power and coercion are individual human beings. Each person makes his or her own choices about the use of coercion. We observe no organism, person, or creature with a monopoly on the use of force, legitimate or otherwise. The illusion to the contrary is made possible simply because many people who coerce others wear uniforms, carry badges, or otherwise claim to "represent" "the State". The wearing of uniforms, the carrying of badges, and the claims of some people that they are part of "the State" does nothing to show that there is such a thing.

To clarify the issue, before finishing with "States", let us consider other collections of persons. Do corporations exist? Does a club exist? The answer depends on how the question is to be taken. If it means "Is there literally a creature which thinks, acts, plans, and makes agreements?" then the answer is no (see next section). If the question is merely "Does the collection of persons involved possess a high enough degree of functional integrity to constitute a thing?" then I believe the answer is plausibly in the affirmative. There are corporations, although they are not things that literally plan, act, or think - though we may treat them as if they have these powers, considering this to be a useful fiction.

What gives a corporation its functional integrity?

A corporation exists where there is a fairly tight set of relations between persons, each of whom has the capacity to reason, plan, decide and contract. A corporation _is_ essentially a set of agreements between persons; these are agreements to perform certain duties and functions, to accept certain responsibilities, and to receive certain benefits under specified conditions. It is quite definite and determinate who is and who is not part of a corporation. A customer is not a part since he or she does not have the necessary kind of relation to the other people. The corporation is limited in various ways. When a person who is part of the structure of the company steals, rapes, or does anything outside of the functions and activities agreed to in joining the corporation, she is not acting as _part_ of the company. She is individually _entirely_ responsible for the effects of her actions. If, on the contrary, her actions are in accordance with the structure of agreements which constitutes the company, other people may (depending on their contractual agreements) share in responsibility.[9]

There is no similar means of determining who the people are who are to constitute a "State". The reason is that there is no set of contractual relations to be found at the level of a "State". This is because of the coercive nature of statism - binding contractual relations are not possible while under threat. It would be more promising to argue for the existence (but not the legitimacy) of groups like the Los Angeles Police, The Chicago Police, The Internal Revenue Service, and the House of Representatives. Within each of these bodies more specific functions can be identified and there are definite agreements between the people involved.

Putting all of these bodies together does not create a "State". Where is the functional integrity necessary to the existence of a further thing? People who go to voting booths and pull levers or make marks on paper next to the name of a politician also have certain relations to those men and women sitting in Congress, and relations (at a far remove) to "the police", and yet no one claims that voters are part of "the State" or are really also policemen. So the fact that we can find _some_ relation between those people who might be thought to form "the State" is not enough to show that there is such a thing.

True, there is more of a connection between members of "Congress" and tax-extortion collectors than there is between the four items I arbitrarily picked out on my desk. However, there is insufficient coordination between the various agencies mentioned to form a higher level agency. They generally have no specific contractual linkage - the only linkage is externally imposed by "law". I have many interactions and relations with my friends, yet there is no thing composed of myself and a friend. In the same way, these agencies can have many links without constituting anything. They _do_ have something in common - statist behavior. But the statist behavior of the individuals in any of these agencies does not differ in kind from that of other individuals who are not thought of as part of "the State". This leads into a related argument, in the course of which I will develop this point about the spectrum of statism.

4: Argument From Methodological Individualism

What kind of thing is "the State" supposed to be? It is supposed to be an agent capable of making decisions, having justification, and acting. This is nonsense: Only an individual has a mind and can perceive, think, decide, choose values, and act. In this sense no governments (or corporations or nations) exist or act. If groups (such as corporations) pass the functional integrity test and so exist in some sense, they are still merely "metaphorical constructs for describing the similar or concerted actions of individuals."[10] In the case of "the State", since it fails the functional integrity test, there is a more serious failure of reference when we refer to an action of "the State". At least when we talk of a corporation's action we manage to refer to certain fairly definite actions of specifiable individuals. "The State" is not only not an ultimate actor or agent, it is not a thing of any kind.

Since "the State" is not any kind of thing, we cannot truly speak about it. However, we are doing <u>something</u> when we say "the State is pursuing a War on Drugs." We are making an inaccurate and misleading reference to a wide range of differing behaviors in many individuals. We are saying - at least - that certain persons calling themselves "policemen" (or "soldiers") are initiating physical violence against drug users; other individuals (politicians and bureaucrats) are issuing orders and directing activities; others (judges) are telling the seized persons that they are guilty of a crime; others (prison guards and administrators) are constraining the freedom of the drug users; and many individuals are encouraging these activities by voting, paying "taxes" and by verbal support.

As Ludwig von Mises noted, "It is the meaning which the acting individuals and all those who are touched by their action attribute to an action, that determines its character. . . A group of armed men occupies a place. It is the meaning of those concerned which imputes this occupation not to the officers and soldiers on the spot, but to their nation."[11] We understand fully the actions of a group only when we understand the subjective beliefs, decisions, and actions of the individual human beings comprising the group.

"The State" is really nothing more than statist behavior and belief - and elements of this can be found in almost everyone. I have argued that there is no boundary which can divide off some behavior as constituting "the State" from other behavior. This point can be made more forceful by considering the wide range of statist behavior and thinking found in society (or "society"!). If it were possible to order these instances along a spectrum we might arbitrarily draw a line beyond which we would say the collection of behaviors <u>was</u> "the State". However, apart from the fact that it <u>would</u> be arbitrary (unlike the division of eagle parts from non-eagle parts), there is no single dimension to be ordered into a spectrum. People can be more or less statist at different times and in very different and incomparable ways.

Political office holders, who make laws and oversee and coordinate a wide range of statist behaviors, are clearly guilty of statism much of the time, as are the physical enforcers of unjust laws. Obviously they can be more or less statist depending on what they do and say. Bureaucrats who organize and execute

statist activities, lowly office workers in the FDA, DEA, IRS, and INS, and those who support their activities are all sources of statism. Business people who gladly accept and encourage subsidies, tariffs, and "government" licenses are not excused from charges of statism simply because they are supposedly not part of "the State". Workers in state-run and monopolized businesses - such as the post office and state schools, are also contributing to statism. Voters are statist because they legitimize the system. The person who uses the power of a "State" agency unjustly against someone (rent control, for example) is being statist. Anyone voting for, verbally supporting, or turning a blind eye to statism is thereby statist.

In so far as there is any sense to talk of "the State" then, it is talk of statist behavior. And this is not confined to easily specifiable individuals. We may all be statist at times. Perhaps even the least statist of us sometimes choose statism in order to protect ourselves against worse behavior by others. In a corrupt system, behavior that you would otherwise reject may be the only rational course of action. This is the tragedy of the institutional effects of statism. For example, in a socialist country where everything is owned by "the State" (=everything is run in a statist manner), you may face the choice of working in a statist institution or starving. In this country, if wish to mail a letter first class, you must choose between the "government" monopoly or nothing. What are you to do?[12]

5: Bringing About a Better Anarchy

We already live in an anarchy. There is no "State". There are only individuals acting in a statist manner, often because they believe it to be right, to be necessary, and because they see no alternative. Extropians who wish to bring about a more rational social system, a system more capable of allowing diversity, of encouraging rational responsible behavior, and of minimizing conflict, should not join political parties, or try to attack "the State". What is needed is a micro-politics, a politics of individual behavior.[13]

We should seek to minimize our own contribution to statism, and to persuade others to do the same. We should withhold all support for statism whenever possible without seriously endangering ourselves. We should avoid paying tax-extortion (the life blood of statism) and should pay no heed to unjust laws whenever we can. We should encourage a cultural change, by rewarding and praising voluntaristic and anti-statist behavior, art, fiction, movies, and role-models and by pointing out what is wrong with their contraries. And in doing this a sense of humor can only help us. Sometimes it is a grim fight, but extropians are dynamic optimists and realize that hard fights against stupidity and coercion are best fought with high ideals conjoined with humor and understanding, not anger, hatred, or violence. Our goal is to increase understanding and increase rationality and responsibility, not to destroy.

One of the four central extropian principles[14] is that of self-responsibility for one's values, choices, and thinking. Living up to this principle is the best way to fight statism and to bring about the universal extropian community proper to intelligent beings. A focus on the individual and the rationality of behavior will not only break down statism, but all

other forms of collectivist irrationality such as racism, sexism, and nationalism.

In a forthcoming issue, in my article on spontaneous orders, I will illuminate the theoretical underpinning of the voluntarist society that should succeed statism as our intelligence and rationality expands over the coming decades and centuries. We have changed enough to do away with monarchies and theocracy, and totalitarianism is breaking down all over the planet as advanced communications technology inescapably brings awareness of superior alternatives to the peoples of those countries. Centuries ago, the idea that humans could handle the freedom of modern limited democracies would have been ridiculed. Let us not be deterred from seeking a spontaneous voluntarist society by cynics who stand for stagnation. Freedom is our evolutionary future.[15]

Notes

[1] Aleister Crowley expressed the second of these values in his Thelemic dictum: "Do what thou wilt' shall be the whole of the law." This does not mean "do whatever you feel like doing"; rather it implies a deep investigation of one's individual nature and a commitment to actualizing that self, while taking into account one's context of internal and external facts and relations.

[2] I write "the State" in inverted commas in order to highlight my view that there is no State. This isn't strictly necessary since we don't normally refer to "unicorns" but to unicorns. The point of this device is that far more people believe in "States" than in unicorns and so I wish to emphasize its mythological nature.

[3] The libertarian free market anarchist view (or "spontaneous voluntarism") is best explained and defended in David Friedman's *The Machinery of Freedom* (Open Court, 1973, 1978, 1989), but also see Murray Rothbard, *For A New Liberty: The Libertarian Manifesto*, *Power and Market*, *The Ethics of Liberty*, and "The Anatomy of the State," in *Egalitarianism as a Revolt Against Nature and Other Essays*, and Morris and Linda Tannchill, *The Market for Liberty*.

[4] An exception to this sad tendency is the group called "The Voluntaryists." The Voluntaryists oppose voting and standing for election as being an endorsement of statism. Voluntaryists are more consistent methodological individualists than other libertarians.

[5] Of course there is much more to be said here. One problem is that though things have causal natures relations and natures that they have independently of our acts of classification, at the level of human perception and normal discourse it may be unclear which classification is most accurate. We may also be selective about the interrelations on which we choose to base our categories, since we may require a constrained view of what we are referring to in order to suit our conscious purposes. For instance, in everyday non-scientific talk we may refer to "genes" as if they were distinct units. In doing this we should be aware of what we are doing and be prepared to speak more accurately if necessary. This will require reducing the thing to be explained to its constitutive elements. See C.A. Hooker, "Towards a General Theory of Reduction. Part I: Historical and Scientific Setting, Part II: Identity in Reduction, Part III: Cross-Categorical Reduction," *Dialogue* 20: 38-59, 201-236, 496-529 (1981).

[6] For a good discussion of the logic of vagueness see Kit Fine, "Vagueness, Truth, and Logic," *Synthese* 30 (1975), pp. 265-300, especially Section 4.

[7] In the heyday of logical positivism many thought that all concepts were individuated by precise necessary and sufficient conditions. The concept of art, for example, should be exactly definable even if this proves difficult. This view is now seen as wildly implausible. Theories of concepts arising from cognitive science tend to emphasize the fuzziness of conceptual boundaries and explain their content in terms of cognitive structures such as neural networks. We decide whether something falls under a particular concept by seeing whether the input to the cognitive system (brain or synthetic neural network) activates the set of nodes (group of neurons and synapses) which encode the concept. There will be threshold effects, so that some inputs will be insufficient to activate the network. Those will not be instances of the concept. See: Barasalou, "The Instability of Graded Structure,"; Armstrong, Gleitman, and Gleitman, "What Some Concepts Might Not Be," (*Cognition* 1983); Osherson and Smith, "On the Adequacy of Prototype Theory as a Theory of Concepts," (*Cognition* 1981); Rey, "Concepts and Stereotypes," (*Cognition* 1983); E. Rosch, "Principles of Categorization," in E. Rosch and

B.B. Lloyd (Eds.) *Cognition and Categorization*, (Hillsdale, NJ: Erlbaum); Paul M. Churchland, *A Neurocomputational Perspective* (MIT Press, 1989); David Kelley, "A Theory of Abstraction," (*Cognition and Brain Theory*, Volume VII, Number 3 & 4, Summer/Fall 1984).

[8] Arguments surrounding the justification of the legitimacy of some agency are complex and cannot be considered here. It should be obvious that such arguments are not independent of the question of the existence of the agency: If there is no such agency we will have to refocus the discussion to one of the legitimacy of individual acts or types of acts.

[9] There is an interesting question about limited liability when it is imposed by law and not by contractual agreement. This feature of currently existing corporations (and trade unions) seems to be unacceptable in my view (and in the views of other libertarian writers).

[10] Murray Rothbard, *Individualism and the Philosophy of the Social Sciences* (Cato Paper No. 4, Cato Institute, 1979), p. 57.

[11] Mises, *Human Action: A Treatise on Economics* (New Haven: Yale University Press, 1949), p. 42. See also Friedrich Hayek, *The Counter-Revolution of Science: Studies on the Abuse of Reason* (Glencoe, IL: The Free Press, 1955), pp. 53-54.

[12] George Smith discusses libertarians who accept work in "the government" in "Libertarian Intellectuals as Government Lackeys" in *Liberty*, (forthcoming, March 1990).

[13] An excellent and empowering source of ideas on how to control your own life free from coercion is Harry Browne's How I Found Freedom in an Unfree World (Avon Books, Macmillian, 1973). I cannot recommend this book highly enough. It addresses not only typical political issues, but also friendships, romantic relationships, work problems, and various constraining psychological traps.

[14] The Extropian Principles will be send out to subscribers before the next issue and will be reprinted in *Extropy* #6.

[15] My early deeply anarchistic thoughts were fostered by Chris Tame and others of the Libertarian Alliance in England (1 Russell Chambers, The Piazza, Covent Garden, London WC2E 8AA, UK). Andre Spies' highly extropic *Meta-Information* spurred the development of these ideas. Conversations with Tom W. Bell helped sharpen the idea for me and induced me to write this article.

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Our Enemy, "The State"

Friedrich Nietzsche: "There are still peoples and herds somewhere, but not with us, my brothers: Here there are states.

"The State? What is that? Well then! Now open your ears, for now I shall speak to you of the death of peoples.

"The State is the coldest of all cold monsters. Coldly it lies, too; and this lie creeps from its mouth: "I, the State, am the people."

"It is a lie! It was creators who created peoples and hung a faith and a love over them: Thus they served life.

"It is destroyers who set snares for many and call it the State: They hang a sword and a hundred desires over them.

"The State lies in all languages of good and evil; and whatever it says, it lies - and whatever it has, it has stolen. Everything about it is false; it bites with stolen teeth. Even its belly is false.

"It would like to range heroes and honorable men about it, this new idol! It likes to sun itself in the sunshine of good consciences - this cold monster! It would give you everything if you worship it, this new idol: Thus it buys for itself the luster of your virtues and the glance of your proud eyes.

"It wants to use you to lure the many-too-many. Yes, a cunning device of Hell has here been devised, a horse of death jingling with the trappings of divine honors! Yes, a death for many has here been devised that glorifies itself as life: Truly, a heart-felt service to all preachers of death!

"I call it the State where everyone, good and bad, is a poison-drinker: The State where everyone, good and bad, loses himself: the State where universal slow suicide is called - life.

"Only there, where the State ceases, does the man who is not superfluous begin: Does the song of the necessary man, the unique and irreplaceable melody, begin. There, where the State ceases - look there, my brothers. Do you not see it: The rainbow and the bridges to the Superman?" (*Thus Spake Zarathustra*)

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I am a Child

By Fred Chamberlain
(April 1970)

I am a child - among infants who call themselves adults and imagine that their years of growth have passed. I will remain a child because to mature is to prepare for death, and my goal is life.

The purpose of life is survival. The weed and the sequoia both survive, but somehow there is a difference. Man, being self-conscious, can work to alter his own nature. The man with the stature of a weed can seek to become like a sequoia. The man with the stature of a sequoia can seek to become anything he can comprehend. But the infant who calls himself an adult seeks nothing.

What interaction do I seek with regard to others? Besides exchanging my work for theirs, I seek to help them grow. I will use my strength to maximum advantage, to increase the growth of others to the greatest extent for each minute of my time invested.

I do not seek to help those who do not need my help - perhaps I need theirs. I do not seek to help those who do not want my help - there are too many others who do want it. I do not seek to help those whose declared purpose is my destruction - survival does not lie that way. I do not seek to teach first grade if I am geared for teaching at a high school level. I seek most to help those who wish to deal with me freely, without coercion. Their growth can only increase the fruition of our relationship, and they do not threaten my existence or my freedom to choose my own values.

Today, I swap apples for oranges. Tomorrow, perhaps I will trade the materials I mine from a planet's core for products manufactured in the corona of the sun. Today I can help children to learn about the pitfalls of irrationality. Perhaps tomorrow I can help other children to discover the full potential of symbolic logic.

But beyond all, my goal is life. For the time being, I will fight biological aging, but - I will not become an adult; I will never mature; I am a child.
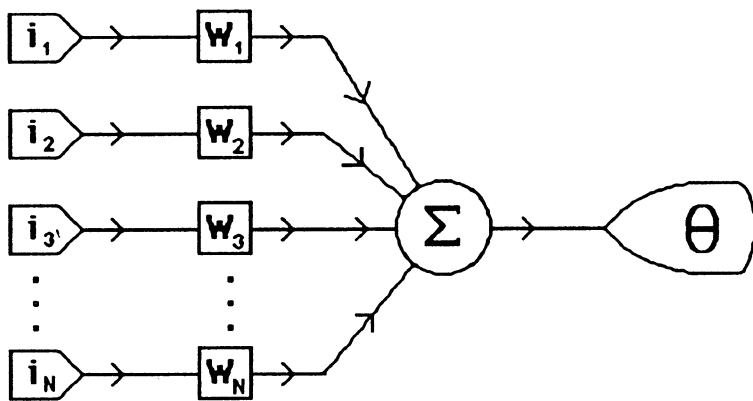
Perceptrons

By Simon D. Levy

     In the last issue of *Extropy,* I promised a review of Minsky and Papert's classic work *Perceptrons* (1969/1987). Looking over that book, I realized that it was too mathematically oriented to be of interest to most *Extropy* readers (including me). Therefore, I have chosen instead to focus on a description of what a perceptron is and what it can and cannot do. With the background given in the present article, anyone interested in pursuing the mathematics of perceptrons will be in a good position to tackle Minsky and Papert's book.

     A perceptron is a computational device capable of a variety of learning tasks. Its name derives, I would guess, from the first such task for which it was designed, the task of perceiving, or recognizing, a pattern. A generic perceptron looks something like this:

Figure 1

     In this diagram, the i's are binary-valued inputs to the perceptron. ("Binary" means "having two and only two possible values" These values are typically represented as On/Off and 1/0). The w's are weights assigning an importance to each input, the sigma is a summing operation, and the theta is a threshold value. A perceptron work as follows: (1) take each input; (2) multiply each input by its weight; (3) add all the results from (2) ; (4) if the results from (3) exceeds theta, answer "yes" (recognition); otherwise, answer "no" (non-recognition).

If all this seems a bit abstract, consider an example. Say we want to design a perceptron to recognize the letter T in a string of letters.   One way to do this would be to set up a letter-sized visual grid to pass over the string (See Figure 2, below).

Figure 2

i_1	i_2	i_3
i_4	i_5	i_6
i_7	i_8	i_9

Figure 3

i_1	i_2	i_3
i_4	i_5	i_6
i_7	i_8	i_9

Each box in the grid would form an input to our perceptron. For the letter T, the inputs (boxes) i_1, i_2, i_3, i_5, and i_8 should get a heavier weighting, since it is in those boxes that most of the ink for the T is likely to be found (see Figure 3, above). (If you were building a letter-recognizing perceptron for real, you would probably want to have many more inputs -- *i.e.,* more fine-grained input -- than shown here. Since the inputs are binary, the level of detail created with only nine inputs would probably be too coarse.)

So the question is, how do we set the weights (w's) and the threshold (theta) so as to get the best recognition? Here is where the real power of the perceptron reveals itself: There is a simple algorithm (procedure) for "training" the perceptron to recognize a pattern. This algorithm is as follows (Rosenblatt 1959):

(1) Initialize the weights and the threshold theta to some arbitrary (random) values.

(2) Take the sum over k of $w_k i_k$ (*ie,* take each input times its weight, and add the results).

(3) If the sum from (2) is greater than theta, set the output equal to 1; otherwise, set the output equal to zero.

(4) Compare the output from (3) with the "target" value for the current pattern. Call the difference between these two values (target minus actual output) delta.

(5) Obtain a new value for the threshold theta by subtracting delta from the current theta.

(6) Obtain a new value for each weight w_k by adding delta times i_k to w_k.

(7) Repeat steps (2) through (6) until delta reaches zero.

A few things are worth pointing out at this point. First, note that steps (5) and (6) form the "learning" stage of the algorithm, the stage at which the perceptron modifies itself to get closer to producing the correct response (*i.e.,* output) for the input pattern. Step (5) adjusts the threshold based on the "wrongness" of the output, and step (6) adjusts each weight based on the "importance" of its input. That's all there is to it.

Second, observe the generality of the algorithm: It can be trained on a pattern having many variants, such as the letter T, by changing the "token" of the pattern (*e.g.,* T's written by different people) on each repetition of steps (2) through (6). It can also be trained on an invariant pattern, such as the Boolean functions described below. The robustness of the perceptron, that is, its ability to deal with a varying pattern, can be attributed in part to the setup of the weights and inputs: the values of w's will, in most cases, be the set of real numbers. Hence, the degree to which a given input unit (box) contributes to the pattern is decided by how often that unit is activated (colored-in by ink) in the tokens.

Third, and most important from a computational perspective, is the "Perceptron Convergence Theorem" proved by Minsky and Papert. This theorem says that, if a mapping (a "correct" theta and set of of w's) exists between the input and output, the values of the w's and of theta are guaranteed to converge (reach a stable value) in a finite number of iterations (repetitions of the algorithm). In other words, *the perceptron will always learn to recognize the pattern in a finite amount of time!*

Two input/output patterns solvable by a perceptron are the Boolean AND and OR functions familiar to students of computer science. In their commonest form, these and other Boolean functions take two binary inputs and yield one binary output. The truth tables (input/output relations) for these two functions are as follows:

AND:

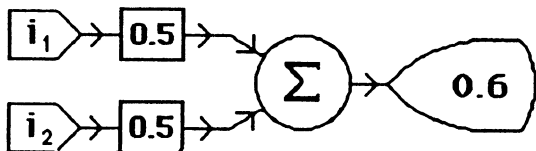| input	output
0 0	0
0 1	0
1 0	0
1 1	1

OR:

input	output
0 0	0
0 1	1
1 0	1
1 1	1

The AND function corresponds to the notion that two conditions must be met for something to happen; *e.g.,* you must have gasoline and a battery in your car to start it. In the OR function, satisfying either condition, or both, is sufficient; *e.g.,* you need and umbrella or a raincoat to stay dry in a thunderstorm, but having both will work too.
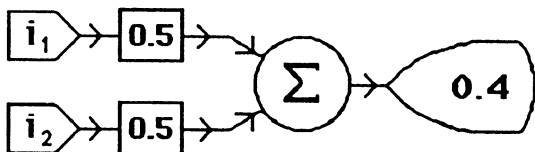
Perceptrons for the AND and OR functions could have the following setup:

Figure 4

$$(0 \times 0.5) + (0 \times 0.5) = 0.0 < 0.6 \rightarrow 0$$
$$(0 \times 0.5) + (1 \times 0.5) = 0.5 < 0.6 \rightarrow 0$$
$$(1 \times 0.5) + (0 \times 0.5) = 0.5 < 0.6 \rightarrow 0$$
$$(1 \times 0.5) + (1 \times 0.5) = 1.0 > 0.6 \rightarrow 1$$

AND

$$(0 \times 0.5) + (0 \times 0.5) = 0.0 < 0.4 \rightarrow 0$$
$$(0 \times 0.5) + (1 \times 0.5) = 0.5 > 0.4 \rightarrow 1$$
$$(1 \times 0.5) + (0 \times 0.5) = 0.5 > 0.4 \rightarrow 1$$
$$(1 \times 0.5) + (1 \times 0.5) = 1.0 > 0.4 \rightarrow 1$$

OR

The Perceptron Convergence Theorem tells us that, by showing that a mapping *exists* for these to functions, we know that the perceptrons could *learn* the mapping. If you doubt this, try the algorithm on a piece of paper. It really works!

Unfortunately, things are not as good as they might seem. There is in fact a simple Boolean function, the XOR (eXclusive-OR) function, which no perceptron can learn. The XOR function is what is usually meant by the English word "or" -- in other words, the output is true if either of its inputs, but not both, is true. (When a policeman yells "stop, or I'll shoot," we don't expect him to be using the *Boolean* OR!) The truth table for XOR is as follows:
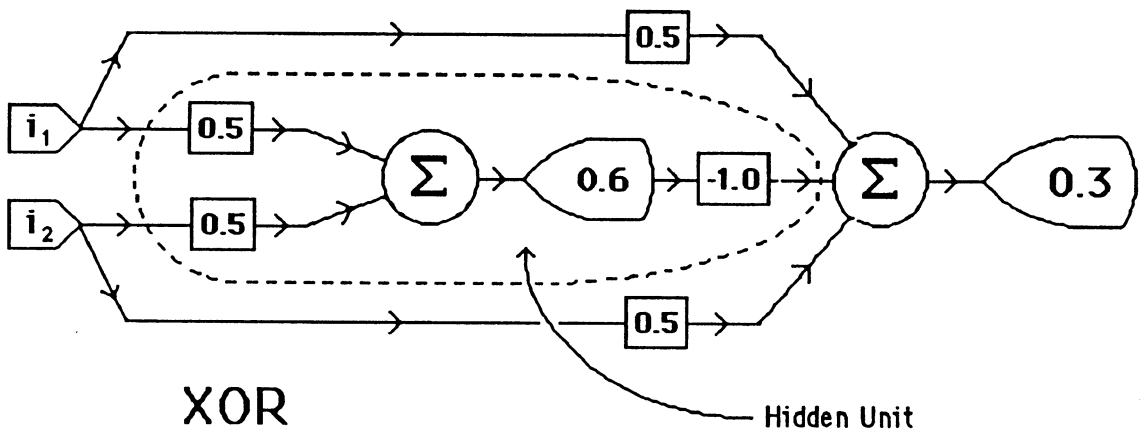
XOR:

input	output
0 0	0
0 1	1
1 0	1
1 1	0

In general, a perceptron is only capable of generating a mapping for functions that are *linearly separable* (Minsky and Papert, *op. cit.*). This means that, if you plot the inputs as (X,Y) coordinates in the Cartesian plane, it must be possible to use a straight line to separate inputs yielding an output of 1 (*e.g.,* the pairs (0,1), (1,0), and (1,1) for the OR function) from inputs yielding a 0 output (the pair (0,0) for the OR function). This test works for AND and OR, but not for XOR. (A diagram would make this point obvious, but if I drew one, I could be risking copyright violation.)

Fortunately, there is a solution to "the XOR problem." By adding an intermediate level to the perceptron -- a so-called "hidden unit" -- we can generate the desired mapping:

Figure 5

XOR   Hidden Unit

Essentially, the hidden unit represents an extra input to the network, an input whose value is the AND function of the actual two inputs (McClelland and Rumelhart 1988). The question then arises of how to train the new network to generate the XOR mapping. Since the perceptron algorithm described above doesn't refer to a hidden unit, that algorithm will not work. In the next issue of *Extropy,* I will describe an algorithm that does work, the back-propagation algorithm.

References

McClelland, J.L and D.E. Rummelhart (1988). *Explorations in Parallel Distributed Processing*. Cambridge, Mass.: MIT Press.
(This is is best introduction to PDP that I have seen, even though it is only supposed to be an exercise book for a larger work by the same authors. If you buy one PDP book, *Explorations* is the one to get. It comes with some neat software for the IBM PC, too.)

Minsky, and Papert (1969; updated 1987). *Perceptrons*. Cambridge, Mass.: MIT Press.

Rosenblatt, F. (1959). Two Theorems of Statistical Separability in the Perceptron. In *Mechanisms of Thought Processes: Proceedings of a Symposium Held at the National Physical Laboratory, November 1958. Vol. 1* (pp. 421-456). London: HM Stationery Office.

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Our Enemy, "The State"

KGB trainee manual: "You must think of humanity -- past, present, and future -- as one great body that requires surgery. You cannot perform surgery without severing membranes, destroying tissue, spilling blood. Similarly, in intelligence we sometimes destroy individuals who are expendable tissues in the body of humanity. Occasionally we must perform unpleasant acts, even kidnapping and liquidation. But none of this is immoral. All acts that further socialism are moral acts." (Reported in John Barron, *KGB: The Secret Work of Soviet Agents*, p. 366)

Max Stirner: "*I* am the deadly enemy of the State, which always hovers between the alternatives, it or I. Therefore it strictly insists not only on not letting *me* have a standing, but also on keeping down what is *mine*. In the State there is no property, no property of the individual, but only State property. . . But, in opposition to the State, I feel more and more clearly that there is still left in me a great might, the might over myself, over everything that pertains only to me and that *exists* only in being my own." (*The Ego and His Own*, trans. Steven T. Byington [New York: Libertarian Book Club, 1963] pp. 255-256)

Randolph Bourne: "War is the health of the State." ("The State" in *War and the Intellectuals: Essays by Randolph S. Bourne, 1915 - 1919*, ed. Carl Resek [New York: Harper & Row, 1964] p. 71)

ON COMPETITION AND SPECIES LOSS

By Max T. O'Connor

COMPETITION

In *Are You A Transhuman?* (reviewed last issue by Mark Potts and myself), FM-2030 makes some remarks about competition which I thought to be off the mark. He blames competition in both the economy and in sport for creating, maintaining, and exacerbating conflict and hostility. He says that, contrary to prevailing views, it is cooperation and not competition that have brought us civilization. But neither the prevailing view nor that of FM-2030 is adequate. There is more than one type of competition; some of it is laudable, some of it isn't.

My discussion draws on Timothy Gallway's *The Inner Game of Tennis* (pp.151-56), and David Boonin's review of *No Contest: The Case Against Competition* by Alfie Kohn, in CRITICAL REVIEW, Volume 2, No.s 2 & 3 (Spring/Summer 1988). Competition is bad when it is zero-sum. A zero-sum activity is one in which if one participant wins/gains the other loses. *This* kind of competition *is* "divisive and inefficient", as FM-2030 states. However, it is mistaken to see all competition in this way. Even in competitive sports which appear to be zero-sum (one individual or team can only win by defeating the other), the participants need not regard their activity this way.

Gallway describes his realization of this fact while playing tennis. As he puts it, "Winning is overcoming obstacles to reach a goal, but the value in winning is only as great as the value of the goal reached." The competitors can take as their goal the defeat of his opponent and the adulation of an audience. In that case the competition will be zero-sum because only one person can be the winner in this sense.

Alternatively, one may participate in a competitive activity in order to stretch and improve oneself. Your goal is to reach your highest limits. Seen in this way your opponent is not your enemy but your friend, for it is she who provides the necessary obstacles that have to be overcome if you are to grow and improve. Gallway: "So we arrive at the startling conclusion that true competition is identical with true cooperation." Many people see their opponents as enemies and build up resentment against them; but this is a problem with their attitudes and not with the competition itself. Not everyone is a MacEnroe.

In an economic context, competition in a free market is beneficial. By competing with each other to best serve their consumers, firms tend to improve their products and decrease their prices. Even within an industry one firm's success does not necessarily mean loss for the others. One firm may pioneer a better productive method which gives them a temporary advantage but which in the long run expands the market to the benefit of other firms.

The government reduces economic competition via regulation, licensing, tariffs, subsidies, etc. I trust I need not bore you with numerous examples of the problems of these policies.

I fully agree with much of what FM-2030 says, such as his view of the undesirability of always straining to be "The Best" at the expense of other goals such as happiness. Competition and cooperation are not opposites in most cases. Let's not blame competition for the behavior of hostile, compulsive, and narrow-minded persons.

ENDANGERED SPECIES

In his review of FM's book in the last issue, Mark Potts disagreed with FM who held that trying to save endangered species is a waste of time. I side with FM on this for the most part. I see only two reasons for saving endangered species. The first is where the animals are "cute" and valued by humans for aesthetic reasons. The second is where it can be proven that we will suffer some real loss by the extinction; a loss which cannot be made up by other means. One way of preventing the loss of a species is by either cryogenically preserving at least one representative, or by simply storing the genome of a member of the species for later reconstruction. (The Foresight Institute is developing the latter approach. Interested? Contact Julie Tracy, 1526 - 16th Avenue East, Seattle, WA 98112, (206) 325-8888 or (206) 325-4326).

As FM points out, 99.99% of all species are extinct. Changing conditions result in the extinction of some species and the emergence of new species taking their place in the limited ecological space. Massive turnover in the content of existing species has not led to ecological catastrophe in the past, so we should not assume that human-caused species loss will have bad consequences.

The methodologically appalling *Global 2000 Report* also argues that species loss will reduce genetic diversity and increase the failure rate of crops. But protecting all existing species is not the way to further productive agriculture. Protecting existing species prevents the emergence of new species which could be superior from the point of view of human values. We can also expect the burgeoning science and practice of genetic engineering to continue producing hardier and more fecund plant species.

Environmentalists often assert that up to 20% of all species could become extinct by 2000. This assertion lacks any supporting evidence - a detailed dissection is made in "On Species Loss, the Absence of Data, and Risks to Humanity", by Julian L. Simon and Aaron Wildavsky, in the excellent book *The Resourceful Earth*, edited by Julian L. Simon and Herman Kahn (Basil Blackwell, Oxford 1984). Simon and Wildavsky demonstrate that the figure is produced by a combination of pure guesswork and highly unlikely projections. They also cast doubt on the claim that species loss has significantly increased recently. The claim that species loss will occur at 40,000 times the rate in the present and recent past is based neither on trend data nor on systematic evidence relating amount of tropical forest removed to species reduction. (Another essay in that collection powerfully argues that global deforestation is much less drastic than commonly thought.)

INTOXICATION

Life in Pursuit of Artificial Paradise

By Ronald K. Siegel, Ph.D.
(E.P. Dutton, New York 1989. 320 pages, $19.95.)

Reviewed by Rob Michels.

The recent War on Drugs and its accompanying propaganda has led to a shortage of realistic literature on the subject of intoxicants. Research by people like Timothy Leary and other free-thinking individualists has been effectively removed from the bookshelves by politicians and their minions. Few people have the courage and the medical knowledge, let alone the skills, to publish material about drugs accessible to the average reader. Ronald Siegal Ph.D is a conspicuous exception to this claim.

In his book *Intoxication*, Siegal tells the story of being in a class as a medical student and hearing the professor say that only humans use drugs. Thinking that this was unlikely, Siegal began to study animals as an assistant research professor at UCLA. He found that not only do animals use drugs, but they do so for many of the same reasons that humans do: boredom, depression, curiosity, health, and addiction. Both in the lab and in the wild, animals from the smallest insect to the largest elephant ingest drugs ranging from natural antibiotics to powerful hallucinogens.

Perhaps the most important fact in Siegal's book is that animals tend to use drugs wisely. Like humans, animals become addicted to refined drugs like cocaine and distilled alcohol, but most drugs in the wild are not nearly so powerful and are thus much easier to use

in moderation. For example, both men and animals enjoy the mildly stimulating and intoxicating effects that follow the consumption of coca leaves, the source of cocaine and crack, without suffering the horrors of addiction. Similarly, many animals ingest over-ripe fruits for the intoxicating effects of the alcohol they contain. With many amusing stories, Siegel illustrates the use and effects of all the major intoxicants: alcohol, nicotine, cannabis, opium and heroin, LSD, PCP, psilocybin, uppers, downers, and a variety of designer drugs.

The message of *Intoxication?* Using drugs for fun is not only natural and common; it constitutes a part of our evolutionary development. As Siegal explains, "The pursuit of drugs is a primary motivational force in the behavior of organisms. Our nervous system, like those of [other animals] is arranged to respond to the chemical intoxicants. . . . Throughout our entire history as a species, intoxication has functioned like the basic drives. . . sometimes overshadowing other activities in life. *Intoxication is the fourth drive*." He traces the role drugs have played in the evolutionary development of both plants and animals, and shows how the chemicals that originally defended plants have come to give us pleasure.

Because intoxication is a human biological drive, no amount of political

oppression will stop drug use. It is like the church trying to eliminate premarital sex - it causes a lot of hypocrisy and lying, but not much chastity. Not much good comes out of it even in cases where fear has resulted in abstinence. Tax money putatively designated for the "social good" subsidizes drug dealers by creating artificially high profits while lining the politicians pockets and pet programs. The government needs an enemy to justify its theft of the citizens' money through taxes. But this time the government has declared battle against one of our basic drives. The result? Useful members of society imprisoned. Others killed. Violence caused not by drug use, but by the laws that create an unnatural market for drugs.

Siegal does not come right out and say that drugs should be legalized and he is careful to point out that his own limited drug use has only been in countries where the drugs he took were legal. But Siegal has political motives; he has served as consultant to two Presidential commissions, the World Health Federation and numerous other prestigious organizations. The solution to our drug problems, he says, is to recognize the legitimate use of drugs, including recreation, and to make drugs *safe.*

Intoxication is a very readable book with no technical jargon. Siegal presents his many examples (perhaps too many) with a sense of humor. Yet he takes his subject very seriously, from the chemistry involved to the political implications of the government having to lie about drugs to justify billions of wasted dollars. (He particularly damns the commercial showing a man cracking an egg into a simmering frying pan while saying "This is your brain. This is drugs. [sic] This is your brain on drugs" - a commercial which targets children young enough to actually believe it.) I question the use of experiments that forced animals to go through drug withdrawal, but otherwise judge it an enjoyable and informative book. Extropians will find *Intoxication* useful in combating dogma and propaganda as well as in shedding some light on the world of euphoria.

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Our Enemy, "The State"

David Thoreau: I heartily accept the motto -- "That government is best which governs least"; and I should like to see it acted up to more rapidly and systematically. Carried out, it finally amounts to this, which I also believe -- "That government is best which governs not at all"; and when men are prepared for it, that is the kind of government which they will have. (*Civil Disobedience*)

Michael Bakunin: The State is "The most flagrant negation, the most flagrant and cynical negation of humanity."
"By its very principle an immense cemetery in which all manifestations of individual and local life. . . come to sacrifice themselves, to die and to be buried." (*Socialist thought*)

INTELLIGENCE AT WORK
Advances in Science

Compiled by Max T. O'Connor & Simon Levy

LIFE EXTENSION AND ENHANCEMENT

(1) Alzheimer's disease researchers are finding more substances that **improve memory**. Physostigmine slows down the normal breakdown of the neurotransmitter acetylcholine; nicotine (given by injection) works by increasing the sensitivity of the acetylcholine receptors. Nicotine did not improve memory but it did decrease reaction time to visual stimuli. Beta-carotene improves speed of information processing (though not memory) probably by affecting the inhibitory effects on acetylcholine transmission of GABA (gamma aminobutyric acid). This effect was not evident in the case of normal healthy subjects. The experimental drug R58735 has strong positive effects on memory in both elderly and normal young persons. It is not yet available to the public. [*Nature* (335207-208, 1988)]

(2) **Memory**: Increasing realization that calcium metabolism plays an important role in aging and memory is leading to investigations of calcium inhibitors. In experiments with rabbits the calcium inhibitor nimodipine brought old rabbits' performance up to 80% of the young ones, compared to 20% of the untreated. [*Science* (243:809-811, 1989)]

(3) Italian researchers have shown that the drug acetylcarnitine (ACN) **improves memory** in humans and mice. ACN acts on the synapses that use acetylcholine as their neurotransmitter and increases uptake of choline in the hippocampus and cerebral cortex. [*Mechanisms of Ageing and Development* (47:29-45, 1989)]

(4) **Caloric restriction** works on spiders: One researcher got his spiders to live up to 81 days (compared to the average 8 days). [*Experimental Gerontology* (24:83-92, 1989)] M. Horakova and others found that protein restriction in the first six months of a mouse's lifespan followed by caloric restriction increased lifespan by almost as much as caloric restriction from the start. [*Mechanisms of Ageing and Development* (45:1-7, 1988)]

(5) **Beta-carotene**: Evidence for beta-carotene's role in protecting against cancer continues to accumulate. Not only does it protect against lung cancer, there is some evidence that it also fends off stomach cancer and cancers of the ovary, breast, uterine cervix, prostate, larynx, tongue, esophagus, and bladder. It also clearly prevents experimentally-induced skin tumors. Carotenoids (including the alpha form and canthaxanthin) apparently work by shutting down malignant cells and suppressing the expression of a gene -- N-myc -- which might otherwise promote tumor growth. N-myc is a proto-oncogene -- it codes for cell-growth-enhancing proteins, and can boost tumor growth if it functions inappropriately.

The carotenoids greatly reduce its activity, the effect peaking 18 hours after treatment. The carotenoids lycopene (in tomatoes) and lutein (in dark green vegetables, and indoles and phenols (in crucifers like broccoli and cabbage) have also shown anti-cancer effects in animals, according to the Cancer Research Center of Hawaii. The University of Arizona in Tucson study showed that 30mg daily of beta-carotene can reverse leukoplakia -- pre-cancerous white spots to which tobacco users are prone -- in 75% of cases.

(6) **Chromium picolinate**, according to a controlled, double-blind crossover study, reduced cholesterol levels by 7%; it reduced blood sugar, which should reduce the destructive process of glycosylation in which sugar molecules bind to amino-acid molecules and interfere with cell function; chromium picolinate also increased muscle strength and mass; finally, it decreased body fat in one study by 22%. These effects seem to be a function of chromium's role in potentiating the hormone insulin. [Chromium picolinate is available from the Life Extension Foundation: 365 200mcg capsules for $28.00/$21.00 for members. Phone 1-800-544-0577.]

(7) **Killing AIDS**: A new vaccine is being tested at St. Stephen's Hospital in London. It differs from other vaccines in that its main component is a synthetic copy of part of one of the internal structural proteins of the virus, rather than an external protein. This vaccine, HGP-30, if successful could protect against all strains of the AIDS virus (since the structural protein is not subject to genetic drift), and will not itself cause infection (since it contains no live virus). This research is being funded and assisted by Viral Technologies, Inc., which holds rights to HGP-30.

(8) New studies on the **powerful antioxidant** drug 2-MEA support '50s studies suggesting that it improves longevity and immune function. Treated mice had fewer saturated fats in their liver at all ages, had a lower incidence of some forms of cancer, and recovered significantly faster from cold stress. These experiments are notable in that they used long-lived strains of mice (unlike the BHT studies). [*Mechanisms of Ageing and Development*, 45:75-92:1988)]

(9) **Cholestyramine** (brand name Questran), though not new, seems to be known about by few people. It is a resin which can reduce cholesterol by binding to the bile acids in the intestines and enhancing their excretion. Cholestyramine binds 82% of bile acids, 95% of cholesterol, and 92% of fat (the figures for guar gum - the next best agent - are 36%, 23%, and 23% respectively). It seems to be completely safe - several thousand men took six packets a day for 7 years without any problems. It is only available by prescription. [More information can be found in *The 120 Year Diet* by Roy L. Walford, MD.]

(10) **Cocoa butter** - the main fat in chocolate - doesn't raise cholesterol and may lower it in some people, according to preliminary studies. Chocolate does contain other cholesterol increasing fats. A study at Penn State University should soon tell us whether the cocoa butter counteracts the effects of these other fats when they are combined.

(11) **Smokers**: If you're trying to stop effective help is on the way. A skin patch loaded with nicotine, being tested at the Mayo Clinic, releases the drug slowly making it easier to cope with withdrawal symptoms. 77% of those who wore the patch for six weeks were able to quit, compared to 8% of all smokers and 39% of controls who wore a placebo patch.

(12) Want to **think better**? A University of Southern California study showed that thinking on your feet (literally) improves information-processing speed by 5 to 20%. Light exercise, by increasing oxygenation further, improves cognitive performance further.

(13) The villain in heart attacks and strokes is not cholesterol itself but the **toxic oxides** formed when it interacts with other fats, according to Alex Sevanian, Ph.D., at the University of Southern California's School of Pharmacy. The cholesterol oxide compounds irritate the endothelial cells, scarring the blood vessel walls, collecting more fat and restricting blood flow. Cholesterol seems to be most dangerous when consumed with other oxidizing fats such as polyunsaturates. In another study the antioxidant vitamin E lowered cholesterol oxide levels.

(14) **Retin-A**: Apart from unwrinkling skin, dermatologists say it can speed healing after dermabrasion. Dermabrasion, by removing the skin's surface layer, can be helpful in reducing crease lines, acne and other scars, and tattoos. Unfortunately it results in a red scabbed-over look for 10 days or so.

Retin-A, by boosting the cell turnover rate, reduces this time to 5 days.

(15) **Cataracts**: A University of Western Ontario study found that the chances of developing cataracts were cut by 60% and 70% with vitamin E and vitamin C supplementation respectively.

(16) Kicking the alcohol habit: A year of **nutrient therapy** apparently impressively increases the recovery rate for those with alcohol problems. In a study of 111 patients (some of whom had been through 20 previous treatments), 75% of the group were still sober after a year. The normal recovery rate is 20 to 30%. Joseph Beasley, M.D., the medical director of Brunswick Huse in Amityville, New York, says that alcohol addicts are "massively malnourished". Six small meals a day combined with supplementation with multivitamins and the amino acid L-glutamine (to reduce craving) was part of the Brunswick program in addition to behavioral and family therapy.

(17) Electrical stimulation of the brain may induce production of **nerve growth factor** (NGF), a substance which help prevents neuron degeneration. This has advantages over the invasive procedure of injecting NGF (into Alzheimer's patients) according to University of California, Irvine researchers Christine Gall and Paul Isackson.

(18) Older people who exercise exhibit **superior cognitive performance**, even allowing for overall health levels. High exercisers made fewer errors in reasoning, they remembered

more and reacted more quickly. [*Psychology and Aging* 4: 183-89.]

(19) Hostility and mistrust are good **predictors of heart disease** and early death. Hostile Type A's may share a problem: a weak parasympathetic nervous system, whose job it is to calm us in confrontations. Type A's also show a stronger response to cortisol, a hormone that stimulates the release of adrenaline. In a Duke University Medical Center study, the mortality rate for those who had scored high in hostility was 4.2 times higher than the calmer types.

(20) According to H.J. Eysenck, summarizing work in Germany by Grossarth-Maticek, personality type is very strongly **correlated with cancer** and coronary risks. Cancer is most likely to strike "underaroused" people - who have one valued person or object, and who become strained or depressed if they experience loss, distance or separation. "Overaroused" types also focus on one emotional object but react with frustration and anger rather than depression. They have a high risk of heart disease. The healthiest were "autonomous" individuals, who are emotionally well-adjusted, healthy, and self-reliant.

(21) Over many years scientists have tried a long list of drugs to **attack chronic lymphocytic leukemia** (CLL). Few of these have helped as many as 20% of patients. Trials with fludarabine have led to new optimism. Of 127 test patients who failed to respond to traditional chemical and radiation treatments, about 60% have gone into remission without the usual hair loss, nausea and bone marrow suppression. Tests continue.

(22) A good quantity of **fish oil** can protect against various types of cancer, even after lesions have already developed. Fish oil is rich in eicosapentanoic acid (EPA) whose metabolites are more than one hundred times less biologically active than those of arachidonic acid. [*Journal of the National Cancer Institute*, June 7.]

(23) Ascorbate - **vitamin C** - is the most important blood agent in disarming free radicals. At levels found in the human blood plasma, ascorbate neutralized 100% of the free radicals produced in the study. This was a significantly superior performance to tocopherol (vitamin E), which had previously been thought to be the body's most effective antioxidant. [*Proceedings of the National Academy of Sciences*, August 1989, Vol 86, No.16.]

(24) Justin A. Zuvin of the University of California, San Diego, says that **protection against stroke-induced neuronal injury** for some patients can be expected within two years. Many tests suggest that glutamate-receptor blockers, such as MK-801 (closely related to PCP) can limit or prevent symptoms such as paralysis. Other compounds being investigated are the lazaroids and gangliosides. [*Science News*, Nov 4 1989.]

(23) A new and promising **anti-aging drug**: Deprenyl (marketed as Selegiline in Europe and as Eldepryl in the USA) has shown remarkable life-extending properties in early experiments by Joseph Knoll at the Semmelweis University of Medicine in Budapest. In his paper in *Mechanisms of Aging and*

Development, Knoll reports that the 66 rats receiving Deprenyl had an <u>average</u> lifespan exceeding that of the <u>maximum</u> lifespan of the controls. This was despite the treatment having been started in the last half of the rats' lifespans. Deprenyl inhibits breakdown of dopamine, especially in the striatum. More experiments are needed to confirm Knoll's early results. (See Thomas Donaldson's report in *Life Extension Report* - see Resources.)

COMPUTING, NANOTECHNOLOGY, MICROMACHINES

(1) **The Human Genome Initiative** is a vital international project to map the 3 billion DNA bases of the human genome. At an April 1989 conference of experts, Leroy Hood, Director of the National Science Foundation's Science and Technology Center for Integrated Protein and Nucleic Acid Chemistry and Biological Computation at CalTech, suggested that the entire human genome could be sequenced in 11-15 years with the advent of faster computers. Walter Gilbert, a Nobel Laureate from Harvard, went further, saying that the task may be completed by the mid-1990s. Given the increasing evidence for the genetic basis for much of aging, this is exciting indeed.

(2) At the same conference the after-dinner speaker was nanotech luminary **Eric Drexler**. Drexler's ideas brought no major disagreements from the distinguished audience. In view of the unexpectedly rapid breakthrough in the protein-folding problem (achieved by Bill DelGrotto's group at DuPont), Drexler has revised downwards his estimate for the availability of general molecular assemblers to LESS THAN 30 YEARS. Let's keep pressing that accelerator. . .

(3) When was the last time you had a **talk with your computer**? Dragon Systems, Inc., in Newton, Mass., is making it easy. Their DragonDictate (which will run on a 386 processor) handles 30,000 words, adjusting its vocabulary to the words used most often by its owner. It also automatically adapts to a user's accent or language peculiarities.

(4) Chemists at Harvard University have made a number of "**chemzymes**" - small, fairly simple molecules that can do the extremely useful things that enzymes do. They expect the result to be more efficient and cheaper synthesis of drugs, vitamins, and other chemicals. The researchers are using chemzymes to eliminate undesired by-products of reactions.

(5) 2 million cylindrical lasers, each about a twentieth the girth of a human hair and a tenth of a hair-width in height, have been packed onto a chip the size of a dime. The **laser forest** was created by molecular beam epitaxy to grow carefully regulated semiconductor chips. Alternate layers of gallium arsenide and aluminum arsenide are stacked to form two mirror-like regions, then the individual layers are chiselled out by several processes. These devices will allow the speeding up of computing and communications by making possible otherwise inaccessible light-based technologies.

(6) More **memory expansion:** A flat optical memory chip will be able to store 250 million bits of information (equivalent to about 400 issues of *Extropy*). In the August 25 issue of *Science*, chemists Peter Rentzepis and Dimitri Parthenopoulos propose a method of storing more than 6 trillion bits (about 9.6 million issues of *Extropy*). Their idea is to embed photochromic chemicals - which change color when illuminated - inside transparent plastic cubes. Lasers would be used to record data as colored and uncolored dots in the cube. They say that much hard work lies ahead before such devices can be built.

OTHER ADVANCES

(1) Raising children: Adolescents turn out best if given strong support and firm direction by their parents, reported Diana Baumrind of the University of California, Berkeley at this year's American Psychological Association meeting. Children with "authoritative" parents -- those giving strong support and firm direction -- were the highest achieving and most confident. A "democratic" approach, involving support but little directional control, led to children with high self-esteem and competence but higher chances of heavy involvement with drugs. "authoritarian" (low support, high control, "unengaged" (low support, low control), and "nondirective" (low control, medium support) styles produced children likelier to be low achievers, self-doubting and unhappy.

(2) Neuronauts note: **MDMA** (methylene-dioxy-methamphetamine), a drug also known as XTC or Adam, is now undergoing tests for usefulness and neurotoxicity in Switzerland. Preliminary human tests support contentions that MDMA can help in treatment of various disorders, including phobias, neuroticism, and obsessive-compulsive disorder.

Neurotoxicity is also being investigated by George Ricaurte at John Hopkins. So far his research on animals has shown no neurotoxicity in primates at doses several times that taken by humans. Last year Ricaurte found that though serotonin levels fell in monkeys following intensive administration of the drug, after ten weeks there had been considerable recovery. Mark Geyer of UCSD found that there were no behavioral abnormalities even in rats given repeated doses four times the average human dose. Two studies are currently under way in the U.S..

(3) Heavy pot-smokers beware: Studies on marijuana-abusing children at the Georgetown University School of Medicine, indicated that the heavy pot smokers did much worse on tests of short-term memory than did users of other drugs or no drugs. Six weeks after cessation of usage there was some improvement, but impairment was still evident. If you like to smoke, keep the quantity low; and remember that water pipes filter out most of the carcinogenic material.

(4) There are many millions of times more living things on our planet than previously thought, according to Gunnar Bratbak and colleagues at the University of Bergen in Norway. **Viral concentrations** in marine and freshwater environments are 10 million times those previously recorded. In the

August 10 *Nature* they reported that 1 teaspoon of North Atlantic seawater taken from 10 meters down contained 75 million viruses. There were more than one billion viruses in a teaspoon of water from a nutrient-rich lake.

(5) New crystalline materials **harder than diamond** may be available very soon. Researchers at the University of California, Berkeley can predict compressibility on the basis of the length of bonds connecting the constituent atoms and their arrangement. Such materials will allow us to intricately shape diamonds for use in electronic and other applications.

(6) Advances are being made towards using **photoreceptor transplants** to restore vision. [*Investigative Ophthalmology & Visual Science*, August 1989, and *Science News* Nov 4 1989.]

(7) **Lenses get smaller**: Advanced grinding has produced crystalline flakes only six times the surface area of this "s" which accommodate more than 1000 lenses, each about 130 microns across. These thousand-eye chips, made of gallium arsenide, will be helpful for hybrid optical/electronic computers, sensors, and communication devices. [*Applied Physics Letters*, July 10 1989.]

(8) Plastics may be used to generate power. Engineers George W. Taylor and Joseph R. Burns of Ocean Power Technologies, Inc., foresee a new power-generating technology called **hydropiezoelectricity**. This would use piezoelectric slabs to transform wave motion into electricity. Each pound of the material could generate 2 watts; a 1-megawatt facility would need about 220 tons of the material.

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Our Enemy, "The State"

Alfred J. Nock emphasized the difference between "government," the social order that arises spontaneously from the undirected actions of self-interested individuals, and "the State": "The nature and intention of government, as adduced by Parkman, Schoolcraft and Spencer, are social. Based on the idea of natural rights, government secures those rights to the individual by strictly negative intervention, making justice costless and easy to access; and beyond that it does not go. The State, on the other hand, both in its genesis and by its primary intention, is purely anti-social. It is not based on the idea of natural rights, but on the idea that the individual has no rights except those that the State may provisionally grant him. It has always made justice costly and difficult to access, and has invariably held itself above justice and common morality whenever it could advantage itself by so doing. . . . Taking the State wherever found, striking into its history at any point, one sees no way to differentiate the activities of its founders, administrators and beneficiaries from those of a professional-criminal class." (*Our Enemy, the State*, [Delevan, Wisconsin: Hallberg Publishing, 1983, originally published 1935] p. 42 *footnotes omitted*)

EXTROPIAN RESOURCES

Complied by Max O'Connor & Tom W. Bell

(Suggestions for other inclusions are welcomed.)

BIOSTASIS ORGANIZATIONS:

Alcor Life Extension Foundation: 12327 Doherty St., Riverside, CA 92503, Tel: 1-800-367-2228, in California (714) 736-1703. We believe this to be the largest and most sophisticated of the cryonics organizations. Their monthly magazine CRYONICS contains many articles of excellent quality, covering not only biostasis and life extension but other issues of relevance. ($25/year)

American Cryonics Society: Suite 368, 870 Market Street, San Francisco, CA 94102. Their magazine is AMERICAN CRYONICS. $25/year.

The Immortalist Society: 24443 Roanoke, Oak Park, Michigan, 48237. Tel: (313) 548-9549. Publishes THE IMMORTALIST. Run by the father of cryonics, Robert Ettinger.

Alcor-UK: c/o Luigi Warren, No.6, Townend House, High Street, Kingston, Surrey KT1 1NA, England. Max helped found this, the major European cryonics group in 1986. It recently received a major financial and organizational boost and now has a facility and equipment.

The Venturists: P.O. Box 458, Wrightwood, CA 92397. A cryonics "religion" (really a reliberium) which holds events, publishes VENTURIST MONTHLY NEWS, promotes cryonics in the media, and is run by the very able and energetic Dave Pizer and Mike Perry.

Lifepact: P.O. Box 18698, South Lake Tahoe, CA 95706. Focuses on preparing for the future reanimation and rehabilitation of biostasis patients.

Federation of Cryonics Societies (FOCUS): Newly formed group which seeks to encourage cooperation between cryonics societies in order to protect their mutual interests. Address as for Lifepact.

Reanimation Foundation: c/o Saul Kent, 16280 Whispering Spur, Riverside, CA 92504. Set up to help members of cryonics societies establish secure trust funds in Liechtenstein, so they can better provide for their suspension and reanimation costs.

Citizens for an Extended Lifespan (CEL): 9149 Sepulveda Blvd., Suite 139, Los Angeles, CA 90045. Intended to protect and advance the legal status of cryonics.

OTHER LIFE EXTENSIONISTS/ IMMORTALISTS:

Life Extension Foundation: 2835 Hollywood Blvd., Hollywood. Florida 33020-9982. (305) 925-2500. Produce the excellent LIFE EXTENSION

REPORT which will supply you with up-to-the-minute information on life extension research advances. $27/year. Membership of the Foundation ($50/year) entitles you to the Report and to a 25% discount on the products of Life Extension International (see below).

Life Extension International: 1142 W. Indian School Road, Phoenix, Arizona 85013. 1-800-678-8989. A comprehensive source of vitamins, minerals, and other life extension supplies.

Longevity: From the publishers of OMNI, a glossy magazine with some good articles. Available at the newsstand, or from LONGEVITY International, Ltd., 1965 Broadway, New York, NY 10023-5965. (212) 496-6100. $3/issue; $21.95/year.

Pharmaceuticals International: 539 Telegraph Canyon Road, Ste. 227, Chula Vista, CA 92010-6436. 1-800-365-3698. Supplies life extending and brain boosting drugs, some of which cannot be bought in this country even with a prescription. PI is allowed to import these and you can buy them without a prescription. Centrophenoxine, Hydergine, Piracetam, Isoprinosin, Retin-A, Ribavirin and others.

University of California, Berkeley Wellness Letter: P.O. Box 420148, Palm Coast, Florida 32142. Good source of information on health issues. $20/year (29 in Canada), 12 issues.

Brain-Mind Bulletin: Interface Press, P.O. Box 42211, 4717 Figueroa St., Los Angeles, CA 90042. $35/year. Summarizes reports on research into health and psychology, and mind/brain-body connection. Expensive for what you get (8 pages).

EXTROPIAN SCIENCE FICTION:

Lifequest: c/o Imladris Corporation, P.O. Box 18690, South Lake Tahoe, CA 95706. "Fictional works about life extension, including suspended animation, elimination of aging and progressive self-transformation." Good and improving quality of stories. Subscription: $6 - one year (two issues), $10 - two years.

ANALOG: $2/issue, $25.97/year. P.O. Box, 7061, Red Oak, IA 51591. Wide-circulation magazine has long been printing pro-liberty stories, and has recently been publishing a lot of nanotech and immortalist stories, including the classic "The Gentle Seduction" by Marc Stiegler (April 1989).

Prometheus: 89 Gebhardt Road, Penfield, NY 14526. The newsletter of the Libertarian Futurist Society. $8/year ($10 overseas) for 4 issues. Reviews libertarian science fiction and bestows the Prometheus Award.

SPACE:

National Space Society: 922 Pennsylvania Avenue, SE, Washington, D.C., 20003-2140. Write to them for information about membership and local groups.

American Rocket Company: 847 Flynn Road, Camarillo, CA 93010. (805) 987-8970. Private rocket launch company.

OTHERS:

Boing Boing: P.O. Box 12311, Boulder, CO 80303. $10/4 issues. Cyberpunk, nanotech, brain toys, self-modification, reviews. First issue came out in August 1989.

Claustrophobia: 5047 SW 26th Dr., Portland, OR 97201. Covers space and life extension from a libertarian viewpoint. Will cease publishing before very long, but take a look while you can. You may want back issues.

Factsheet Five: c/o Mike Gunderloy, 6 Arizona Avenue, Rensselaer, NY 12144-4502. $2/issue. Prints capsule reviews of hundreds of small circulation magazines on all kinds of odd subjects, including those you will be interested in. A perfect complement to the Loompanics catalog.

Liberty: Liberty Publishing, P.O. Box 1167, Port Townsend, WA 98368. $35/12 issues. The best libertarian journal for serious and non-dogmatic discussion. Highly recommended. Has many of the best libertarian writers.

Light Living: POB 190-ez, Philomath, OR 97370. "Free for SASE. 1990 guide to unusual how-to sources. Describes 50 periodicals & handbooks on backyard tech, camping, crafts, finding new friends, gardening, home education, low-cost shelters, travel, unusual science. All addresses are included." (exchange ad)

Loompanics Unlimited: P.O. Box 1197, Port Townsend, WA 98368. Catalog of books that are hard to find elsewhere, on subjects like life extension, science and weird science, "reality creation", drugs, beating "the State", and self-defense. The reviews are fun to read even if you buy nothing. Vital!

Miami Metropolis: 1552-A Euclid Ave., Miami Beach, FL 33139. FREE! New art, musik [sik], fiction, and ideas. Focus on Miami area, but has goodies for outsiders, too. Issue no. 7 featured 3-D art. Can't beat the price....

Mondo 2000: Fun City MegaMedia\Mondo 2000, P.O. Box 10171, Berkeley, CA 94709-5171. $24/six issues. Irregularly published glossy magazine, covers similar topics to EXTROPY. Much interesting and/or good stuff mixed in with plenty of bullshit. Especially good on new products in computing and electronic media.

Science News: 231 West Center Street, Marion, Ohio 43305. $34.50/year (52 issues). Useful and concise summaries of advances in science. Saves the time required to wade through hundreds of pages in other magazines.

Sound Choice: P.O.B. 1251, Ojai, CA 93023. "$3 for 96-page sample, or SASE for more info. A publication of the Audio Evolution Network, an open-minded organization dedicated to the positive evolution of independent music, audio art, and related subjects." (exchange ad)

THE EXTROPIAN DECLARATION

Extropians: Forward! Upward! Outward! Into the future!

We who want to live, we who want freedom, we who want to learn: We challenge the forces of entropy!

We deny *all* limitations on our boundless wills: Ignorance, State, Religion and Death.

We want more intelligence, more power, more liberty. We want more life!

More! More!! More!!!

More. . . about extropy:

Why are we 'extropians'? Because we want to survive and prosper in our often hostile universe. As scientists describe it, our universe naturally tends toward entropy. It is entropy that breaks down our cars, shorts out our computers, and withers our flesh. Entropy is the supreme enemy of human hope.

Extropians hold a consistently anti-entropy point of view. What does 'extropy;' mean? Look to its etymology: 'Entropy' comes from the Greek 'en', or 'in', plus 'trepein', or 'change'. 'Extropy', on the other hand, comes from 'ex', or 'out', and 'trepein'. Thus while entropy decreases order, usable energy, and information, extropy increases all three of these goods, goods that our well-being demands. In a universe threatening to drown us in a rising tide of disorder, extropy offers us safe passage to higher ground.
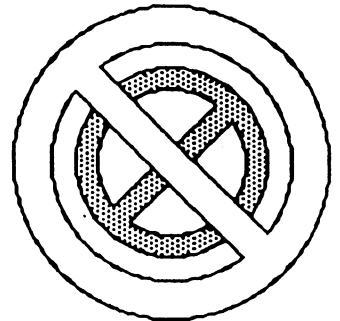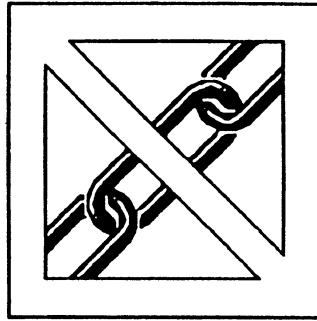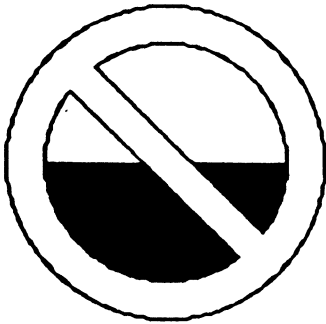
Prepare for the future

It's not going to go away! After wandering along at a slow pace for centuries, our world has started to enter a period of change that will far outpace historical standards. The changes occurring in the twentieth century dwarf those of any previous thousand years, but they only hint at what what the future holds. We face a turning point in history - a time when artificial intelligence, nanotechnology, physical immortality and other factors promise to radically transform virtually every aspect of our existence. We are each of us responsible for preparing ourselves for that future, and for helping others to understand the coming age.

Ready. . . Set. . .

We must radically revise our present conceptual frameworks, values, and expectations if we are to both survive and prosper in the coming age. Extropians view the future optimistically. Our optimism is both a rational expectation based on the facts *and* a nonrational (but not irrational) *attitude* towards the future. Aiming high will help us reach our goals. Optimism can be self-fulfilling! We expect great things from the future because we foresee incredible opportunity, diversity, and beauty. We will have material abundance beyond our dreams, a pollution-free environment, fantastic intelligence, the ability to create new worlds, and other wonders yet untold. We look forward to rationally using these opportunities, and enjoying ourselves fully in doing so.

Let's Go!

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