
Chapter 9

The Dunbar Number, Political Power, Public Relations, and Fear: Can Humans Act Sustainably?

9.1 The Sustainability Hypothesis: Is it True?

Most species eventually go extinct. For humans there are at least two possible types of extinction: collapse of complex civilization (a type of “super-organism”), and biological extinction of the species, *Homo sapiens* (or more precisely *Homo sapiens sapiens*). In this section I want to discuss from a mathematical perspective just a few fundamental weak links in the way society is now organized which could lead to its disintegration. Hopefully, suitable changes will be made so that social disintegration is made improbable.

Every organism, “super” or otherwise, needs to earn a living within the ecosystem it finds itself. Humans have changed their ambient ecosystems to an extent not practiced by other species, who largely adapt their behavior to the immediate requirements of Nature. But as Ian McHarg so aptly stated, cf., [431]: “*Brain is on trial.*” Compared to bacteria, for example, humans have been around for a very short time on planet Earth. From the standpoint of survivability, bacteria present the most robust form of life. As the late Stephen Jay Gould said:

“On any possible, reasonable or fair criterion, bacteria are – and always have been – the dominant forms of life on Earth. Our failure to grasp this most evident of biological facts arises in part from the blindness of our arrogance but also, in large measure, as an effect of scale. We are so accustomed to viewing phenomena of our scale – sizes measured in feet and ages in decades – as typical of nature.”

Bacterial biomass on Earth is enormously larger than that of humans. “Brain” is a recent development, and humility is in order. We have a long way to go before we can claim superiority to bacteria as a resilient, sustainable form of life. Our complex civilizations are even more recent – and more fragile. For an argument (involving cognitive neuroscience and evolutionary psychology) that Nature’s experiment, “the human brain,” will be coming to an end relatively soon, see [550], by Marc Pratarelli. Given the history of human behavior, Pratarelli’s arguments cannot be dismissed easily. In light

of [550] *I will make an assumption* the truth of which is quite debatable: It is possible for some collection of humans to voluntarily create a culture which can live sustainably within the ecosystem it finds itself – surviving and preventing conquest by humans with unsustainable cultures. I will refer to this assumption as the *sustainability hypothesis*. The practices of war, subjugation, occupation, extraction (without recycling), and any other form of conquest for the purpose of acquiring resources, do not count as sustainable practices, since eventually one runs out of people or ecosystems to conquer.

We are thus led to a *tautology*, which is useful for focusing our attention. If human societies are to forestall extinction, sustainable cultures must be invented and prevail in the long term. We are left with defining “sustainable cultures.” This definition is susceptible to analysis via mathematics and science. For example, a society that attempts to grow in numbers or consumption beyond all bounds is not sustainable, as has been pointed out by many folks. I will leave to you the exercise of stating the definition of a “sustainable culture” as precisely as you can. Hint: See Part VII.

Once having made a fundamental change in the ecosystem that supports our lives, such as inventing agriculture, we must make sure that the underlying logic of these changes is consistent with the logic of Nature and that we have social structures that can sustain these changes. Humans have the capacity to imagine. Imagination can be used to create temporary “realities” in contradiction to Nature’s logic, or imagination can be used to create a logic for civilization that is consistent with Nature’s logic and the technology to implement it. The “jury is out,” it could go either way.

A fundamental problem is our focus on ourselves and our creations without ever thinking of how those creations fit into Nature. Is our society a comfortable, sustainable nest, compatibly nestled in Nature; or is it an irritant to Nature to be expelled – “spit out like a watermelon seed” – into the cold, darkness of eternal extinction? But I am getting ahead of myself. I want to first look at a number, a number I find endlessly fascinating since it likely is one of several human biological limitations, cf., [550, 360], that we must take into account in our quest for survival.

9.2 The Dunbar Number

Robin Dunbar, cf., [153], has developed a formula for computing what Malcolm Gladwell, cf., [225], might call the social capacity of various mammals. The social capacity, or maximum group size, for an animal is the largest number of intimates or reasonably close friends/acquaintances an individual can really relate to. Dunbar plugs in the size of the neocortex relative to the size of the brain and comes up with a number, which in the case of humans is

147.8, roughly 150. He looked at 21 hunter-gatherer societies for which reliable historical evidence exists – including the Warlpiri of Australia – and found that the average number of people in their villages was 148.4, cf., III.

There are various physical and biological constraints on humans, cf. [550, 360], but the *Dunbar Number* quite possibly may have far reaching implications. Consider for the moment a person like the President of the United States. He/she can have fewer than 200 close associates, but his/her decisions affect millions, perhaps billions, of people. How are those decisions reached? The President's close associates, one can safely assume, have a greater impact on the President than people the President does not know or has never met.

The same can be said for a senator or congressional representative. It might be important before voting for these folks to know who the “Dunbar associates” are of the person for whom you are voting, and what these associates think.

Exercise 9.1 Possible Implications of the Dunbar Number

(i) If the model proposed by Robin Dunbar is correct, then 150 is roughly an upper bound on the number of intimates a person can have. It has been claimed that it is common for a middle-aged men in the United States to have few to no close friends. How many close associates, i.e., intimates, do you think the typical human has? Does this number depend on the culture in which that person finds him/herself?

(ii) Is it possible to break the Dunbar number “barrier” using technology? For example, using media such as newspapers, books, the internet, television, radio, do you think it is possible to have more than 150 intimates? How do you define “intimate”? For example, if you send a personal email to someone and they return a curt (automated?) reply: “See my weblog,” do you consider this intimate?

(iii) Do you think the Dunbar number is a measure of our brain's ability to get on an intimate basis with a certain amount of data in a certain amount of time? By being intimate with data I mean familiarity to the extent one believes and/or trusts that data. Do you think that for data/information to lead to action that one has to be intimate with that information?

(iv) It is likely that a person is more deeply, personally, emotionally affected by things that happen to people in their Dunbar cohort than to people outside of this group. How might this influence a person's level of reaction to – and ability to sustain this reaction over time to – environmental tragedies or other events that appear to be localized in affect? (Consider at least two cases. One where the people affected are outside one's circle of friends and acquaintances, even outside of one's perceived social/economic class or regional/national identity. For example, when a tsunami or earthquake devastates a city or country, often a remarkable outpouring of assistance comes from a variety of folks not “Dunbar related” to the victims. But how long is this outpouring maintained? In the second case, assume the people affected are close family, friends, or associates. For example, if someone from group A uses a weapon, like a predator drone, to wipe out the family and friends of someone from group B, do you think the reaction of the remaining person in group B might be intense and long lasting?)

(v) Do you think the Dunbar number concept partially explains why associates of Goldman-Sachs virtually control the U.S. Treasury Department independent of which political party holds the presidency? Is a similar analysis relevant to the Secretary of Defense and the core leadership of the military?

(vi) If you think of each person surrounded by a “cloud” of Dunbar associates/intimates, does this change how you would model social interactions, communications?

(vii) Investigate the extent to which the Dunbar number is used in the organization of corporations? For example, are there advantages to limiting “subunits” of a corporation to fewer than 200 employees? Do any corporations do this?

(viii) Do Supreme Court justices in the United States traditionally come from a narrow cohort of the population?

Exercise 9.2 The Scale and Type of Representation Envisioned by the Founders

I have a poster-copy of the originally proposed 12 Bill of Rights hanging on my wall from the National Archives. There really were 12!

(i) When the original Bill of Rights was sent to the states in September of 1789, it contained 12 amendments not 10. The legislatures of the states voted on each amendment individually and ratified only 10 of the 12. The remaining two – the first two, as it turned out – failed to win approval in three-fourths of the legislatures, as required for ratification, and so did not become part of the Constitution.

As a result, Amendment Three of the original 12 became Amendment One, the “Free Speech” amendment, Amendment Four became Amendment Two¹ and so on.

Even though over 200 years have elapsed, the original first two amendments should still become part of the Constitution if three-fourths of the state legislatures ratify them – and guess what? The original Second Amendment was finally ratified on May 7, 1992 as the 27th Amendment. This 27th Amendment provides that no pay raise for senators or representatives could take effect until after the next election.

That leaves the original First Amendment. What did it say? It said: *There shall be at least one representative in the House of Representatives for each 50,000 people.* The current size of the House of Representatives is 435. What would be the size of the House of Representatives if this Amendment were ratified by three-fourths of the state legislatures? It is interesting to note that in my state one member of the Colorado State House of Representatives represents about 50,000 people. What are the figures for your home state?

(ii) An interesting article appeared on February 23, 1997 in my local paper titled: “How to make Congress better: Make it Bigger.” This article was a reprint of the original written for the Boston Globe by Jeff Jacoby. It is interesting to see that the scale of representation has appeared at least once in the majority media. Jacoby recounts that when the first Congress was seated in 1789, there were 65 members of the House of Representatives, with the U.S. population estimated at 2 million, i.e., there was one representative for roughly every 30,000 people. The 1790 census put the U.S. population at 3.9 million and the House of Representatives was increased to 105. In 1800 the U.S. population was 5.3 million, the House grew to 141. Jumping to 1910, the U.S. population was 92 million, and the next year President Taft signed a bill increasing the House of Representatives to 435 in 1911. The ratio of representatives to citizens was now roughly $\frac{1}{200,000}$. In 1929 the size of the House was officially frozen at 435, no matter how much the population grew. When I first considered this exercise in 1997 we had about 260 million Americans, with each of the 435 representatives representing on average almost 600,000 citizens. This is not a favorable ratio compared to many other countries. For example, (in 1997) in Japan each member of their Diet’s lower house represented about 245,000 people; for the German Bundestag the ratio was $\frac{1}{100,000}$; for Canada’s House of Commons, $\frac{1}{96,000}$; for Britain’s, $\frac{1}{89,000}$. In 2010 the U.S. population soared past 300 million.

Discuss how passing the original first amendment would affect a representative’s campaign expenses and current non-stop need to fund raise. Discuss other effects of passing the original first amendment. It is very interesting that the framers of the Constitution had a scale of representation in mind. That scale is determined by how many people one representative can adequately communicate with. Has this scale changed in the last 200 years?

¹It is an interesting exercise to look up the history of the currently designated Second Amendment which is in part about guns. The original version of this amendment written by Jefferson proposed more of a Swiss model for an army which would be disbanded in a time of peace, but which would be an ever ready citizen-militia trained in the use of firearms and military matters. Imagine, no standing army, no military-industrial complex.

Estimate the number that would replace 50,000, if any, given modern communications technology and the current budget of each person in Congress allotted to communication with constituents?

(iii) There is an enormous army of lobbyists, about 33,000 to 38,000 “on Capitol Hill,” prevailing upon the 435 representatives, 100 senators and various administrators. Do these lobbyists “fill up” the “Dunbar capacity” of all those who create and administer our laws? These lobbyists are equipped with an enormous weapon, not available to most groups of Americans. After the *Citizens United v. Federal Election Commission*, 130 S. Ct 876 (2010), decision of the U.S. Supreme Court on January 21, 2010, any (U.S., multinational, or foreign) corporation or union can spend an unlimited amount of money to elect or defeat a given candidate – a legislator, a President and so on. Does this affect, or intensify, the “Dunbar effect” of lobbyists?²

(iv) Thomas Jefferson was concerned that a common pattern would be repeated in the United States, i.e., that power would be consolidated into the hands of relatively few. He was also concerned that the judiciary would provide the mechanism for this consolidation to take place. Consider and comment on the following quotes from Jefferson, at the time you read this.

“The [federal] judiciary branch is the instrument which, working like gravity, without intermission, is to press us at last into one consolidated mass.” Thomas Jefferson to Archibald Thweat, 1821, [407, 15:307].

“There is no danger I apprehend so much as the consolidation of our government by the noiseless and therefore unalarming instrumentality of the Supreme Court.” Thomas Jefferson to William Johnson, 1823, [407, 15:421].

9.3 Public Relations, Political Power, and the Organization of Society

From one perspective civilization can be viewed as a big game, in the sense of game theory, involving acquisition or loss of political and economic power by the various players. One might expect that some players would be better at playing the game than others. The “game” depends on the “rules,” either followed by mutual consent among (or imposed upon and by) the human players, or imposed by Nature.

A Possible Model of Social Organization. The building blocks of society are most naturally “Dunbar cohorts.” Beyond this basic observation there are a number of ways these building blocks can be assembled into a society. Before outlining actual current structure, I would like to briefly describe an

²For example, just one corporation – Goldman Sachs – spends more annually to pay just its top employees than the combined assets of all the nation’s major unions. University of Wisconsin communications professor Lew Friedland points out that the nation’s four largest banks would have to allocate a mere one-tenth of one percent of their assets – \$6 billion – to counter a campaign in which the whole of the U.S. labor movement spent all of its assets. And some corporations, such as Exxon, have vastly more capital to work with than even Goldman Sachs, cf., http://www.thenation.com/blogs/thebeat/521020/unions_can_t_ompete_with_corporate_campaign_cash.

alternate model. Following a principle of *mutual respect* these Dunbar cohorts could *freely choose* to associate into larger units, e.g., neighborhoods, small to large cities, counties, states, nations, the global community. Vast networks of communication and trade, in ideas and materials could self-organize from “the bottom up.” Toward guaranteeing the ability for subunits to leave larger associations when the larger system “does not work” for the subunit, the ability to provide basic necessities of food, water, energy, shelter, and social organization should be retained at the smallest, most local level possible. (For example, Los Angeles, via the citizen-owned Los Angeles Department of Water and Power, was able to provide its own energy during the 2000–2001 California energy crisis, and thus was not at the mercy of government deregulators and the likes of Enron, cf., pages 211, 492.)

Such a system would make maximal use of local knowledge, allow for innovation and experimentation, and be more robust than a centrally controlled “top down” model. For example, the so-called capitalist and socialist models of social organization could be but two among many models in practice at a given time, and “may the best model win.” For example, some community could adopt nuclear power, another could adopt renewable solar, wind, pumped storage without either imposing their model on the other, or requiring one to subsidize the other against their will.³ Hundreds of arrangements adapted to local geography and circumstances could be developed for solving the basic problems of life: eating, keeping warm or cool, staying healthy, seeking happiness and so on.

A key concept here is that the subunits freely and mutually agree to form larger associations – which any subunit can elect to leave if it decides the larger association is not in its best interest. There are (would have been) some interesting consequences of this concept. For example, the state of Florida would have had the right to ignore the top down decision of the Supreme Court in *Bush v. Gore* in 2000. Florida could have then followed its own laws and the fundamental principle: an election is determined by counting all the votes. The process of counting all the votes – a principle more fundamental than the Supreme Court itself – was arbitrarily interrupted by the Supreme Court in this case. Of course, the “United” States would be a different sort of union, if such options were allowed.

Looking back over history, the Civil War could have been avoided if “the South” had been allowed to separate from the rest of the United States and continue with its abhorrent practice of enslaving humans. Over time slavery would likely have been abandoned in “the South” just as apartheid was abandoned in South Africa – without wars, since there exist much more popular and efficient methods of social organization. (Of course, slavery would not

³If the community that adopts nuclear power cannot manage the waste products produced or has an accident not confined to that community, then they are being subsidized by any outsider who is affected.

exist in the first place in a world that accepted the principle of associations freely entered upon at the individual level.)

The Bio-Copernican Axiom could play a role here. It basically has every individual realizing that “I am not the center of the (biological or social) universe.” A Dunbar cohort that adopts this axiom would likely be quite successful and sustainable – if it is not eliminated or subjugated during a violent attack by others. And this points out one of the major weaknesses of *Homo sapiens*: the propensity to quickly devolve into violence as a means of asserting the will of one individual, group, or nation-state over the will of other folks. It would be preferable for such warring units to accept a universal principle of *mutual respect* – and just refuse to interact, to dissociate, perhaps forever. Peaceful “divorce” is preferable to violent war.

What is the Structure of Current Civilization? I will speak mainly about the U.S. situation here, although the model applies elsewhere. Briefly, some players of the economic and political game have temporarily “won,” i.e., their wills dominate the society, and they maintain dominance by a quite sophisticated public relations apparatus, backed up by teams of lawyers, law suits, private or government “security” teams, and military assaults when and where necessary. (Especially for those who vigorously disagree with this last sentence please see Exercise 9.3, and cf., [477] and www.poclad.org, for a history of corporate power.) This, of course, is hardly a complete analysis; but if the reader will humor me I will soon outline some of the extreme negative consequences of a civilization run by a merger of corporations and the government while giving evidence that many (soon to be all?) of U.S. society’s major decisions are made by relatively few folks in large corporations, either directly or by surrogates. There are alternatives.

From social psychologist Alex Carey’s posthumous 1997 book: *Taking the Risk Out of Democracy: Corporate Propaganda versus Freedom and Liberty*, we read: “The twentieth century has been characterized by three developments of great political importance: the growth of democracy, the growth of corporate power, and the growth of corporate propaganda as a means of protecting corporate power against democracy.”

Let me briefly review some of the immense negative consequences of past corporate behavior, which I abbreviate as the WACU (We Are the Center of the Universe) pattern of behavior, cf., Chapter 4, page 84. I accept as axiomatic that given any pattern of behavior, no matter how positive or negative, will eventually be engaged in, absent effective feedback, i.e., regulation, from the rest of us.

Some Examples of Negative Consequences of WACU Behavior. For profit corporations are not easy to control, but they are easy to understand. They tend to follow the path to maximum profits in terms of cash while avoiding social or environmental costs, absent regulation, i.e., *effective* feedback from the rest of us. By means of well-funded public relations campaigns, i.e., *propaganda*, corporations can construct *alternative realities* which are professionally designed to get people to accept a narrow corporate vision of reality – which is often at odds with reality itself.

(•) For most of the last century the tobacco industry successfully created the false reality in people's minds that smoking is not harmful. Documentation now shows that for some time the industry knew it was lying. (WACU) The campaign continues in various places around the world, many people believing that smoking does not cause health problems. As I write, even in the U.S., about 400,000 people a year die from smoking related illness, according to government statistics. If $\frac{400,000}{365} \approx 1,096$ people died per day from, say, airline crashes (a few passenger jets crashing *per day*) it would be newsworthy!

(•) Elsewhere, cf., page 84, corporations dealing with lead, vinyl chloride, and asbestos have been documented to exhibit the WACU pattern of behavior, creating virtual realities to maintain a narrow notion of profitability, costing some their lives. This documentation is extremely hard to get. It is even more difficult to prevail in court against such corporations, cf., [479]. Thus the question arises if there are many megacorporations that do NOT exhibit the WACU pattern of behavior.

(•) In the first chapter of this book we began by pointing out that “Big oil, auto, and tire” corporations conspired to eliminate a popular form of transportation in the United States, i.e., electric rail. The population at the time was kept in the dark as to the existence of this conspiracy; and since almost no one today is aware of this criminal conspiracy (they were convicted!), history has been successfully rewritten. (WACU) The reality is now upon us; there are halting attempts to reconstruct “fast tracks,” “light rail” across the U.S. We would have continuously had a system of electric rail and roads if the natural processes of social and economic self-organization had not been purposefully derailed by a few corporate leaders for their own short term gain – at enormous costs to society in the long run.

(•) We now know, see page 24, that powerful corporations were (are) behind a disinformation campaign concerning global warming. (WACU) Their own paid scientists told them that global warming was real and that humans were the likely cause. These corporations chose to ignore the truth and lie to the public, and the propaganda continues. Society's response to global warming has been delayed for decades and continues to be “put on hold” due to this purposefully induced confusion in the public mind, greatly increasing the chances that the human response will be too little, too late. A tragedy is in the making, since alternatives providing more employment and less environmental impact have existed for some time.

(•) The financial industry, cf. Chapter 2, successfully managed Congress and the President into lifting government regulations on their activities. This industry knowingly gambled with other people's money and lost, nearly crashing the world economy, [668]. After trillions of dollars were transferred from the public to this industry – *thus privatizing profits while socializing costs* – they have shown no signs of remorse, of being thankful, or even educability. (WACU.) They immediately and successfully prevented government reinstatement of many essential previous regulations. This situation is the clearest and most undeniable demonstration that the U.S. does not have a capitalist sys-

tem. As Senator Durbin said, the “banks own the place.” It appears that in the eyes of these corporations America is managed first for their benefit, if economic benefits might remain for those they are chartered to serve or for the general population that would be nice but evidently not necessary. It should be noted that the special inspector general for the Troubled Asset Relief Program, Neil Barofsky, said: *“Even if TARP saved our financial system from driving off a cliff back in 2008, absent meaningful reform, we are still driving on the same winding mountain road, but this time in a faster car.”* (See January 31, 2010 Associated Press article by Daniel Wagner and Alan Zibel.) Taxpayers have been forced to support failure. Wall Street is on public welfare, but such language is not SAFE, see page 591, in this context. See also Chapter 2.

Models for avoiding future tragedy in energy and finance exist. For example, the media did not cover the fact that while private investor-owned (and unregulated – see the next bullet) energy company Enron was wrecking havoc in 2000–2001, MUNIs, cf., page 492, municipally owned utility companies such as the Los Angeles Department of Water and Power and their public were doing quite well. Likewise, Canada did not experience the financial meltdown felt in the United States in 2008 and following. As Paul Krugman points out, cf., *The New York Times*, February 1, 2010, Canada’s banks are too big to fail, and the “too low” interest rates in the U.S. were closely followed by the Canadians. The big difference was close regulation by Canada’s independent Financial Consumer Agency which sharply restricted *predatory lending*, euphemistically and frame changingly referred to as “subprime lending,” cf., Chapter 2. For the time being, American corporations and the U.S. government are apparently unable to learn from examples that work. Effective and honest feedback is necessary. This feedback might come positively from an informed public, or it might come negatively in the form of complete collapse.

(●) Research the behavior of the Enron Corporation and its role in the 2000–2001 energy crisis, particularly in California, cf., page 492. Tapes of disgusting and profane corporate Enron conversations concerning the apparent “joke” of causing people considerable pain have surfaced. (WACU) Here’s an example. A phone conversation somewhere between Los Angeles and Houston, July, 2000.

“Wassup down at the grid, bro?”

“Nothin’. Just f***ing with California, man. Wanna see something cool? Look outside your window.”

“Hey, the lights just went out in Beverly Hills.”

“Yeah. Let’s see those rich b****es get liposuction in the dark. Watch this.”

“The power just went down at Cedar Sinai Hospital.”

“Cool, huh? We get bonuses for that one. Last night I was able to shut down a defibrillator at UCLA Cardiac Care from 1500 miles away.”

“F’in A.”

“Wait. The hospital lights just went on.”

“F***ing generators.”

“I know. Ill get someone on that right away..”

“F***ing sick people.”

“I was just thinking. What if the Feds cap energy prices?”

(Pause, then hysterical laughter)

"Yeah. That'll happen...when Cheney tells Waxman who was in his energy meetings."

(More laughter)

"Wait a minute. What energy meetings?"

"Exactly."

"No, I'm serious. Cheney? Waxman? What energy meetings?"

"Oops. Forget I said that. The Enron time/space continuum is still in experimental stage."

"You know, he steals money from California to the tune of about a million."

"Will you rephrase that?"

"OK, he, um, illegally abrigates, sucking every possible penny from any and everyone in California no matter how poor, no matter how elderly, no matter how sick, to the tune of a million bucks or two a day."

"Better. Who's he?"

"Well...not Lay or Skilling...wink-wink."

"They make Halliburton business practices look legal."

(Pause. Hysterical laughter)

"I'm only kidding."

"How can we get away with a f***ing mugging of a state's treasury without someone getting wise? I mean, we're stealing aren't we?"

Stealing? Nah. Its f***ing capitalism, man. First we manipulate the energy flow, they start rolling blackouts, prices go up and then we capitalize on it. Thats why they call it capitalism. Stealing is when you get caught."

"You sure?"

"Look. Its all about denial. People say there might be a problem and we just deny it. Ooh, look. I just turned off all the street lights in Compton. BAM! Yeah! Y'see, people have faith in big business. We're like the rich uncle who you don't diss because you don't want to be written out of the will." (See <http://www.americanpolitics.com/20040617Young.html>, <http://www.cbsnews.com/stories/2004/06/01/eveningnews/main620626.shtml?tag=contentMain;contentBody>, http://en.wikipedia.org/wiki/California_electricity_crisis, there exists much more: search "Enron tapes.")

At the time the administration and media blamed environmentalists for the energy crisis, when in reality it was purposely caused by Enron and colleagues to increase profits. The megamedia did not cover this until after the inexorable march of mathematics and dishonest accounting brought Enron to bankruptcy. If it had not gone bankrupt, it would likely never have been stopped! Yet another example of megamedia's avoidance of information that is not SAFE.

(●) President and General Dwight D. Eisenhower warned us about "the military-industrial complex." It is now a military-congressional-industrial-educational-media complex with about a trillion dollars of economic impact per year reaching almost every part of the U.S. economy, [689, 286, 594]. I will let you decide who paid for the disinformation campaign, but the President and Vice President repeatedly gave us reasons to go to war with Iraq. The Secretary of State gave many reasons why the U.S. had to go to war with Iraq in a famous speech before the United Nations, February 5, 2003. All of those reasons were false. (WACU) Saddam Hussein was not involved with the 9-11 attacks in New York, there were no weapons of mass destruction, our GIs were not universally welcomed, and the rest of the world did not fall into line, and so on. In fact, worldwide protests were marginalized, if mentioned at all, by the megamedia. Again the megamedia deemphasized, or completely ignored, information that was (is) not SAFE. Information that is not SAFE

might challenge the wisdom of the few who are making the big decisions that affect us all.

I could go on at book-length giving examples of decisions made by very few for their own narrow economic benefit, paid for by the many who are increasingly eliminated from the decision-making process.

All of the above examples were in a time *before* the Supreme Court decision in *Citizens United v. FEC* that gives corporations, whether domestic or foreign, the right to spend *unlimited* cash to influence elections. (WACU) Given the corporate track record above, I expect very clever campaigns that the general public will not associate with corporations at all, putting into office virtual corporate puppets. If a puppet acts without strings, he/she will immediately be disciplined by disinformation campaigns. Just the threat should be sufficient, and the occasional crucifixion will do the rest. Corporations will create a virtual reality for us with a logic quite at odds with the logic of Nature, and hence with disastrous consequences.

My hope is that a tipping point has been reached which will reverse the ridiculous legal fiction that corporations are people, cf., www.poclad.org, entitled to more freedoms than real people. A constitutional amendment to this effect coupled with public funding for elections (we all pay in the end anyway, cf., Exercise 24.3), hopefully will be the fruit of this Supreme Court decision.

Exercise 9.3 Government for Sale?

(i) Well before and up to the Supreme Court decision in *Citizens United v. FEC*, enormous amounts of money flowed into campaigns from corporate sources. (Much of this money then flowed on to other corporations, megamedia corporations, for political advertising.) Mathematically one can test the effect of this money on the legislative (judicial and executive) systems by seeing if there is any correlation between “money from X” and “decisions favorable to X.” See, for example, [395, 396, 398, 635, 514, 667], www.votesmart.org, www.publicintegrity.org for data on financial contributions to the political process.

(ii) How do you think *Citizens United v. FEC* will affect the political process?

(iii) What actions can be taken to return the political process back closer to “one person, one vote” and away from “one dollar one vote?”

(iv) Research the use of force against citizens on behalf of corporations. For example, force has been used against labor on many occasions. How, and at what cost, did labor win the 8 hour day, 40 hour week, and 5 day work week, i.e., the concept of a “weekend”? Research the Ludlow massacre in Colorado, where the National Guard attacked mine workers on behalf of a corporation. Research Kent State and Jackson State, where force was used to kill students protesting the Vietnam War, for example. How many people went to jail for trying to get Congress to consider “single-payer” health care? (A concept supported by a majority of the population, yet there was not a single lobbyist for it.) Does a government that starts a war of choice when the majority of the population opposes the war actually represent that population or other interests? If a system ceases to work for a population, the only avenue available is (peaceful) protest, supposedly assured by the U.S. Constitution/Bill of Rights. Yet every protest of consequence is met with overwhelming force. Consider the first WTO protest in Seattle, cf., Exercise 2.10 part (iv), and every such protest since. Consider climate change meetings and protests, e.g., Copenhagen. Consider Democratic and Republican National conventions. All is not always simple. A peaceful protest can be made to look violent by means of *agents provocateurs*. What are they? I have had more personal experience than the typical citizen with regard to peaceful dissent with the goal of informing the public. The megamedia has almost never given coverage

equally balanced between the dissenting citizen and corporate points of view; and significant, *effective* dissenters are “monitored,” or “neutralized,” (or worse) by police, the FBI, or some similar agency. Remember that environmentalists are often referred to as “ecoterrorists,” even if they are dedicated to nonviolence. For those who doubt any or all of the above, try to peacefully change something in the world that seriously and negatively affects the flow of money to a powerful interest. Make sure you have many friends with you when you do.

(v) Citizens in Arizona and Maine have managed to institute a system of public funding of elections. However, constant struggle is part of the process. Lawsuits against the system, in Arizona, have resulted in parts being declared unconstitutional by a lower court and the Supreme Court. What is the status of public funding of elections at the time you read this? (Of course, unlimited corporate funding of elections is constitutional!)

9.4 Political Uses of Fear

Hermann Göring was on trial at Nuremberg for Nazi war crimes during WWII. During a three-day Easter recess, on April 18, 1946, Göring made the following comments to Gustave Gilbert, a German-speaking intelligence officer and psychologist who was granted free access by the Allies to all the prisoners held in the Nuremberg jail. In Gilbert’s book, *Nuremberg Diary*, Gilbert recorded Göring’s observations that the common people can always be manipulated into supporting and fighting wars by their political leaders: (Göring’s comments are in italics.)

“We got around to the subject of war again and I said that, contrary to his attitude, I did not think that the common people are very thankful for leaders who bring them war and destruction.”

“Why, of course, the people don’t want war,” Goering shrugged. “Why would some poor slob on a farm want to risk his life in a war when the best that he can get out of it is to come back to his farm in one piece. Naturally, the common people don’t want war; neither in Russia nor in England nor in America, nor for that matter in Germany. That is understood. But, after all, it is the leaders of the country who determine the policy and it is always a simple matter to drag the people along, whether it is a democracy or a fascist dictatorship or a Parliament or a Communist dictatorship.”

“There is one difference,” I pointed out. “In a democracy the people have some say in the matter through their elected representatives, and in the United States only Congress can declare wars.”

“Oh, that is all well and good, but, voice or no voice, the people can always be brought to the bidding of the leaders. That is easy. All you have to do is tell them they are being attacked and denounce the pacifists for lack of patriotism and exposing the country to danger. It works the same way in any country.”

Exercise 9.4 Uses of Fear in Politics and Assorted Topics

(i) Discuss this quote in the sense of using fear to *frame* debate and sell a war, see George Lakoff, cf., [380] and Section 8.3. If everyone understood this exercise do you think wars would be less frequent?

(ii) Discuss the use of “fear of financial collapse” in politics, cf., Chapter 2. Such a fear was summoned while arguing for public bailout money to private banks. What measures should be taken to reorganize our political and economic system so that this tactic cannot be used? What is a *scapegoat*? When immigrants are made into scapegoats is this an example of a use of fear?

(iii) As Michael Moore pointed out in his movie, “Capitalism: a Love Story,” many corporations take out life insurance policies on some (or all?) of their employees. They are referred to as *Dead Peasant* policies. Thus if, for lack of health care, for example, an employee dies, the corporation profits. Look up at least ten corporations that take out dead peasant policies on their employees. How good is the health insurance for employees of these corporations?

(iv) In the May/June 2009 issue of the *Multinational Monitor*, we read: “Drug Company Merck circulated a list of doctors that needed to be ‘neutralized’ because they had criticized the drug Vioxx, court documents revealed in April. Discovery for a class action lawsuit brought in Australia against the pharmaceutical giant alleging Vioxx caused heart attacks produced a series of e-mails containing the doctor ‘hit list.’ ”

“ ‘We may need to seek them out and destroy them where they live,’ one e-mail excerpt read to the court stated. There were also indications that the company used intimidation tactics against researchers critical of the drug, including insinuating that funding to academic and research institutions would be rescinded.”

Comment on this finding. How many more such “interesting” communications from such corporations can you find? See, for example, page 515.

(v) The U.S. Senate makes some effort to track money labeled as corrupt, e.g., money from foreign dictators, arms dealers, drug dealers, and so on, as it flows into American financial institutions. The Senate Banking Committee and Senate Homeland Security Committee, for example, issue reports from time to time on this topic, cf., Associated Press article by Jim Abrams, February 4, 2010. The practice of “laundering” corrupt money continues despite provisions in the law, such as the 2001 PATRIOT ACT, forbidding it, except for some “loopholes.” (See, for example, www.pbs.org, the *Need to Know* program from 2010: “Getting dirty money clean: A Need to Know investigation reveals just how common it is for major U.S. banks to launder money from drug traffickers.”) Given the fact that unlimited money can be spent on elections, even foreign money, due to the *Citizens United v. FEC* decision of the U.S. Supreme Court in January 2010, estimate the amount of such corrupt money being laundered in the American financial system at the time you read this. Of course, laundered money provides benefits to any financial system in the form of monetary profits, regardless, of its source. What activities are American financial institutions supporting when accepting this cash?

(vi) An understandable reaction to the following is immediate denial. However, the documentation presented cannot be easily dismissed. If you have the time and interest, consider the following challenge to conventional history and make up your own mind. In [669] Robert Stinnett lays out his proof, backed up by twenty years of research uncovering previously classified documents some unavailable for sixty years, that the attack of the Japanese on Pearl Harbor, Dec. 7, 1941, was not a surprise to the FDR administration. Stinnett demonstrates that not only did FDR have ample warning of the attack, but there was a plan to provoke the Japanese into war with the U.S. at the highest levels of the U.S. government. The motivation of the FDR administration was to get an isolationist America involved in World War II. Stinnett’s purpose is not to question the wisdom of that decision, but to record/document what really happened. (I would like to thank the late Gilbert F. White, cf., [312], who was there, and the late Robert McFarland for bringing this subject to my attention.)

(vii) The movie “The Most Dangerous Man in America: Daniel Ellsberg and the Pentagon Papers, the Untold Story of a War, and the Story of the Man Who Told It” 2009, is a documentary film version of [176, 177] the thesis of which is that Americans were misinformed, i.e., lied, into the Vietnam War. Research and discuss.

(viii) Were Americans misinformed, i.e., lied, into the war in (and occupation of) Iraq, cf., [212]? Research and discuss.

(ix) This following exercise is very interesting because there is an abundance of material available putting forth widely divergent views of what happened on 9/11/2001 in the attacks on the World Trade Center towers in New York. First, there is the official view. Now investigations of the attack on Pearl Harbor, say, and the space shuttle disasters (Challenger and Columbia), were begun within a week. Following the attacks on 9/11/2001, it took 441 days to get the 9/11 Commission together and start an investigation. They produced an official report, [480]. Rebuttals to this official report appeared, [261, 2], pointing out such things as the remarkable omission of any explanation for why the *third* high-rise building, WTC-7, which was not hit by any airplanes, collapsed. Then rebuttals to these rebuttals appeared, [154]. These rebuttals were in turn responded to by further rebuttals from those who did not agree with the official report, [262, 623, 744]. There is a growing group of people who have done independent work, arrived at conclusions contradicting major parts of the official view, and who are generally quite as credentialed as those who support the official view. Among these are physicist, Stephen Jones, who has done some remarkable, original forensic work; Richard Gage, AIA, Architect; and Kevin Ryan, “the former Site Manager for Environmental Health Laboratories, a division of Underwriters Laboratories (UL). Mr. Ryan, a Chemist and laboratory manager, was fired by UL in 2004 for publicly questioning the report being drafted by the National Institute of Standards and Technology (NIST) on their World Trade Center investigation. In the intervening period, Ryan has completed additional research while his original questions, which have become increasingly important over time, remain unanswered by UL or NIST.” (See <http://www.ultruth.com/index.htm>, http://www.ultruth.com/Kevin_Ryan.htm) For research articles by those unconvinced by the official view see <http://911research.wtc7.net/index.html>, and <http://stj911.org/>, and <http://www.ae911truth.org/> and <http://journalof911studies.com/>. The megamedia and others often confuse the serious, rational dissenters with irrational folks who advocate violence and/or make assertions such as that there were no airplanes that hit the towers.

To dissent from the official view is regarded as ridiculous by most media. It is thus particularly challenging for anyone to dare question the official reports. It definitely is not a move one makes to enhance a career. But I have found that most people have not taken the time to investigate the serious questions that have been raised. (There are a lot of opinions and statements made by people who have not done their homework on this issue, but then this is not a new phenomenon.) Thus, as I asked in Section 1.4, how do you know what’s true? If you have the time and want a challenge, some interesting research awaits you. I will leave you with some very elementary observations. The towers WTC 1 and 2 were 1,368 feet and 1362 feet, tall respectively. If one were to have thrown a bowling ball from one of the roofs it would have taken about $9\frac{1}{4}$ seconds for the ball to hit the ground, neglecting air resistance. Research as best you can the time it took these towers to fall once collapse began. Verify or debunk the following statement. Both towers fell in about 12 seconds, which is close enough to freefall to raise serious questions since that means that the structure of the buildings did not offer substantial resistance during collapse.

Also in the much delayed official explanation of the collapse of the third tower, WTC-7, do you find credible the NIST explanation of the full 2.25 consecutive seconds of freefall collapse in the 4 seconds of available video of the collapse of WTC-7? WTC-7 collapsed in about 6 and a half seconds. It was 47 stories, or 741 feet tall. Thus it collapsed at freefall speed. (Check this data as best you can at the time you read this.) There are other more complicated exercises one can do, find them – or read the work of others who have done them. A short (and very partial) list of things to check about the destruction of the towers is: sudden onset of collapse; straight down, symmetrical fall; high velocity bursts of debris; sounds of explosions and flashes of light; relatively small rubble plies; total collapse; pulverization of concrete and other materials; huge dust clouds (resembling pyroclastic flows from volcanoes). Some of this research now is found in peer-reviewed journals.

9.5 Confronting Fear (and Apathy): Organizing Your Community for Self-Preservation and Sustainability

The only answer to organized money is organized people.

Bill Moyers⁴ (March 26, 2010)

In Section 9.1 I divided humanity up into roughly two groups: sustainable and unsustainable. For a culture to be sustainable it must overcome inherent human biological limitations, as well as successfully resist all attacks or attempts at assimilation by unsustainable cultures. It is conceivable that islands of sustainable culture can exist within an ambient unsustainable one.

So what am I talking about in concrete terms? First of all, when I think of islands of sustainability I think of the Amish in America, who eschew technology like electricity and car ownership (though they will ride in one); they are apparently nearly self-sufficient. However, they have reportedly been averaging 6.8 children per couple (*Population Studies* (33): pp. 25576); a practice that is not sustainable.

Exercise 9.5 Are There Human Examples of Sustainability?

(i) Research globally for a dozen indigenous cultures that have existed historically. If they no longer exist, were they assimilated or annihilated by an unsustainable culture; or did they die out for ecological reasons? Were any of these cultures sustainable until encounter with an unsustainable culture? For those cultures that were sustainable, were they sustainable by choice or *de facto* for lack of technological alternatives?

(ii) How many indigenous, sustainable cultures on earth can you find at the time you read this?

(iii) Can you find any non-indigenous cultures that are sustainable? Are there islands of sustainable cultures in any unsustainable cultures?

(iv) Though perhaps not perfectly sustainable in every way, are there some contemporary examples of groups of humans who have achieved partial sustainability with regard to, say, energy, or food production, or population growth, etc.?

I suspect that sustainable human cultures have existed, at least *de facto*, and likely by conscious choice. For example, investigate the current status of the Atakapa-Ishak indigenous people of Grand Bayou, Louisiana and the Chugach indigenous people of Sleepy Bay, Alaska. Both of these peoples were (are?) subsistence cultures, which almost by definition implies sustainability, or at least the closest thing to it today. Why did I choose these two? The Chugach, decades after, still feel the effects of the Exxon-Valdez on their traditional food sources; and the Atakapa-Ishak are similarly severely impacted by the BP Gulf blowout of 2010. Is becoming collateral damage more like assimilation or an attack?

⁴This sentiment, possibly the quote, goes back at least as far as the work and writings of community organizer Saul Alinsky (1909–1972)

I have found it difficult to find a contemporary non-subsistence culture which is perfectly sustainable; nevertheless, some groups of humans are conscious of and try to minimize their ecological impact. Others, of course, could care less.

What is a Person to Do? It is an all too common occurrence that a person, or group, becomes acutely aware of the unsustainability of the society in which they are immersed when “the powers that be” come to take something precious away. For me that something was Bowen Gulch, a remnant of old growth forest just outside the boundary of Rocky Mountain National Park, Colorado. That experience, where I briefly had the heart to risk everything, taught me many things which inform the rest of this section.

For the people of Cochabamba, Bolivia, that precious something was local ownership of water. From [615, Chapter 1], we learn the following. In September, 1999, The national government of Bolivia, with involvement of the World Bank and the IMF (International Monetary Fund), signed a contract with Bechtel, one of the largest corporations in the world, and a Bechtel subsidiary, giving Bechtel and co-investors control of Cochabamba’s water for 40 years and guaranteeing a profit of 16% for each of those years. In return Bechtel said it would invest \$50 million dollars in development. However, after \$1 million invested and visible improvement not discernable, the local folks’ water bills jumped upward and became unaffordable to many. This was a very efficient way to convey information to the masses. A protest was organized in 2000. The Bolivian military was called in. One died, Victor Hugo Daza, 17 years-old and unarmed; many were wounded; many were arrested. More protests. The heart of the Cochabambinos was strong enough to prevail. Bechtel left, but sued for \$50 million. *Earthjustice*, formerly the Sierra Club Legal Defense Fund, defended the Bolivians and won.

The local population was then left with reviving its MUNI (Servicio Municipal) for waterworks. Cochabamba is not without problems, since there is a rapid influx of immigrants, swelling the population and the need for more water. The MUNI is not without ethical and management issues as well. However, Cochabambinos know where the MUNI lives, and can give active feedback! What is notable about the Cochabamba Water Revolt is that local, mostly poor people, were able to wrestle control of an essential for life, water, away from some of the most powerful political and economic forces on earth. This event has been an inspiration to many.

Suppose a large corporation sets down near you and starts pumping the ground water your community relies upon. For an example in Kerala, India, see <http://www.corpwatch.org/article.php?id=7528>. For an example in the United States see [589].

The book *Standing Up to the Madness: Ordinary Heroes in Extraordinary Times*, by Amy Goodman and David Goodman, cf., [242], details a number of inspiring success stories of seemingly ordinary citizens in the United States standing up for what they believe in and winning. I will not recount any of these here, but I will note that we have a lot to thank our nation’s librarians

for! Please keep in mind the fact that success is quite possible, as I bring to your attention some unpleasant realities below.

One of the first important things to realize is that whatever your concern, you are not alone. You must *communicate* with those of like mind. The goal is to *organize* as many people as you can around your issue. Technology has made possible a host of mechanisms for communicating and organizing not available a relatively short time ago. The same technology can be used to monitor and infiltrate your campaign, cf., Chapters 22 and 23. In times of repression governments and cooperating corporations can and have shut down internet and phone communications. Try to find people to work with whose egos are smaller than the main issues involved. Do not be too picky, do not shun someone just because you do not agree on everything.

If your struggle is over the environment, seek out help from fellow environmentalists. There are, for example, Sierra Club chapters nearly everywhere, at least in the U.S. If there are none in your area, start one! One reason why I am a life member of the Sierra Club is its true grassroots organizational structure. If for some reason you do not think the Club is doing enough or doing the wrong thing, you can actually organize a grassroots campaign among the members and change things. This is not the case for many organizations. There are often local environmental organizations unknown elsewhere that can be very helpful. By the way, the *Audubon Society* is interested, of course, in birds, but often much more.

Different groups employ different methods, and all (nonviolent) groups have a productive niche. Greenpeace is a rather famous and effective environmental organization. But Captain Paul Watson did not find them aggressive enough in saving whales, for example; so he founded the Sea Shepherd Society. Captain Watson has been known to enforce laws of the sea to protect sea life, including ramming and sinking illegally operating ships. Different groups have different philosophies. Sea Shepherd's, for example, is discussed in [708, 707, 468]. Some groups practice non-violent civil disobedience, as did Mahatma Gandhi and Martin Luther King. Some practice monkeywrenching, cf., [197, 196].

I believe that if most folks know what is really going on in a particular battle of sustainable versus unsustainable, the sustainable side will win over the popular opinion. (Education of the public is one of the most important missions of any environmental campaign.) That is one of the most important reasons non-violence is a most effective philosophy. The last thing you want is for a typical citizen to be afraid of your organization. That is also why corporations and governments often try to "neutralize" effective environmentalists by associating them with violence – using a host of tricks you must be prepared for. Also non-violence (including non-violent civil disobedience) is really the only viable option in the face of governments, corporations, and other sundry groups that are capable of overwhelming violence – and who will not hesitate to use it.

There are many methods and levels of action. For example, planning ahead,

you can try to radically change the laws in your local community to prevent environmental destruction. Examples of this tactic can be found in *BE THE Change: How to Get What You Want in Your Community*, see [406]. While you are doing everything you can think of, contact your Senators and Representatives at the federal and state level and see if they will help you achieve your goals. Sometimes they actually are quite helpful. If they are antagonistic toward you, then you have one more project: organize and replace them with someone more accommodating.

Get a book, such as *The Democracy Owner's Manual: A Practical Guide to Changing the World*, see [614], which covers the basics of organizing. Don't reinvent any wheels. But you will have to be creative; there will likely be details in your campaign that are unique. If you are effective you will attract some attention. Do your best to control how you are represented in the media. When you are attacked in the media, respond as soon as possible. For everyone in your group: NEVER lie. Avoid all mistakes of fact, to the best of your ability.

I do not want to be unnecessarily alarmist, but look at Chapters 22 and 23 to get some idea of what you might be up against when it comes to your own culture, even in the United States. Arrest, torture, and assassination are possibilities just about anywhere in the world. For example, within a few months of my writing this line, two environmentalists were assassinated in Latin America, i.e., El Salvador. David Helvarg's *The War Against the Greens*, [295], gives a partial list of things enemies of the environment are willing to do to environmentalists. Environmental and labor activist Judi Bari was bombed in California, cf., www.judibari.org, cf., "Bari" in the index.

Hopefully you will never have to appear before a Grand Jury, but if you do be warned: *You will have no rights whatsoever!* If this should befall you, get a copy of *Representations of Witnesses Before Federal Grand Juries*, Volumes 1 and 2, by the National Lawyer's Guild. My library gladly displays my well worn copy, since four friends of mine in Ancient Forest Rescue (AFR) were so summoned.

Actually, depending on the situation, you cannot count on having any rights. With laws like the USA PATRIOT ACT, just about anything you do to protect your environment can be interpreted as terrorism. I am *not* kidding. There are sympathetic police and judges, and there are unsympathetic ones. Reporters for Democracy Now! were roughed up and arrested by police for doing their job of reporting at the Republican National Convention in 2008. (A lawsuit is pending.) There are brutal police, and there are fair and just police; my dad was one of the latter. All law enforcement agencies from the FBI, state police, local police, private security, forest service police, and so on, even the National Guard, can and often do cooperate and work together – often for the unsustainable. Always be on the alert for *agents provocateurs* and other infiltration of your group by the police or other interests. This is one of the techniques used to get a group of non-violent protestors associated with illegal acts and/or violence. By adopting a campaign rule that there will

be no drugs and no violence supported by the group, when an infiltrator (or not) proposes or introduces such they can be declared to be acting as if they wish to discredit the group. This way, a level of openness can be maintained while defending against infiltration. If you suspect infiltration, then a lack of trust has developed. Such suspects should not have access to any membership lists or sensitive information! By the way, you can be sued for speaking the truth by a mechanism called a SLAPP suit, Strategic Lawsuits Against Public Participation, cf., [553]. For example, Oprah Winfrey was sued for speaking ill of food on her popular television show; see “Winfrey” in the index.

In the end it all comes down to courage, will power, determination, organization, and *heart*.

Think of your fight as being for sustainability, against unsustainability. If you are still reading this I assume you support living sustainably. There will be no human future unless you and people like you prevail. Remember that. If there are future generations they will thank you. Even though the famous economist, Kenneth Boulding, once said jokingly: “What’s posterity ever done for me, anyway?” Do it anyway. By definition, if unsustainability wins the struggles of today, soon there will be no tomorrows (for us).