

X8 – EXchanging Worldviews, 8: EXamining Operations of the Human System

Dear: In previous X-chapters, I tried to show you a little about the goals of the Human System (in X4), its interactions with its environment (in X5), its organization (in X6), and its potentials (in X7). In this final chapter dealing with examining general features of the Human System, I want to show you a little about how it operates; viz., a little more about politics (from local to global scale). And since an appropriate summary of how it operates is “not so well as it should” (☹), then in subsequent X-chapters, I’ll try to show you some ways that its operation might be improved, increasing the probability for more peace and prosperity.

Before trying to show you more about politics, however, perhaps it would be useful if I provided a slightly more complete review and some additional comments on some of the ideas from the previous X-chapters about “the scope of the problem”. To that end, consider the following list.

- In X1, I introduced the idea of “EXchanging Worldviews” – in particular, exchanging from any of the many “supernaturalistic” worldviews of various religions to the “naturalistic” worldview of Humanism.
- In X2, I tried to show you some of the many reasons why people are religious. In summary, to me it’s so sad to see so many people so desperately, vainly, and egotistically clinging to worldviews concocted, if not by “savages”, by those whose understanding of the world was less than what should be learned by all children in modern elementary schools. Why people would still “believe” in such nonsense is apparently determined primarily from their childhood indoctrination or from their deluding themselves into “thinking” (or better, “wishing” = believing) that they’ll live forever in some fictitious paradise, if only they’ll live their lives as desired by some magic man in the sky – as dictated by a bunch of lame-brain and/or conniving clerics, reading from their out-of-date, scientifically ludicrous, “holy books”.
- Most of X3 was “just” quotations of two recent survey articles about religion and the brain: one (by Sharon Begley) surveyed recent neurological studies that provide information about what occurs in brains during “mystical experiences”; the other (by Robin Henig) reviewed recent studies by evolutionary biologists (and psychologists and sociologists) who have been trying to understand why religions have persisted, in spite of their being “clearly invented balderdash”. The answer may be, as Scott Atran said, “The tragedy of human cognition” (that is, the way we think, e.g., trying to identify causes and their agents), but as others have suggested, it may be associated with the survival value of belonging to a (politically) organized group – even when the leaders are a bunch of lame-brain and conniving clerics with crazy worldviews!

- In **X4**, I tried to show you a little more about systems by demonstrating how they can be categorized according to their goals. My goal was to examine goals of the Human System, but the analysis led to the obvious conclusion that, whereas people's goals depend on their worldviews, the Human System doesn't have an obvious prime goal – in turn, because people can't seem to agree on our prime purpose – in turn, because so many people refuse to “get real”, choosing instead to live in an imaginary world in which some magic man in the sky is in control. In contrast, most Humanists would probably agree that humanity's prime goal could be stated in a manner something similar to: *to expand and apply knowledge to solve human problems more intelligently*. Even religious people might accept such a statement, but then they'd probably insist that the major “problem” is that everyone doesn't agree with their dogma and that “the intelligent solution” is for everyone to become a Christian, Muslim, Mormon, or whatever might be their own, cherished delusion.
- In **X5**, I tried to show you a little about how the Human System interacts with its environment, concluding that our prime *modus operandi* is exploitation of nature. From the analyses shown in **X5**, I hope you gained more appreciation for the idea that humanity's current trajectory is unsustainable. Stated differently, even to avoid environmental and therefore social collapse in the relatively near future, then almost certainly, humans must change their operations – and their worldviews. To do that, however, will require changes in how we humans organize, manage, and govern ourselves; i.e., political changes are imperative.
- In **X6**, therefore, I tried to show you some organization principles of the Human System. Although I haven't finished that analysis (I'll address more in this and later **X**-chapters), perhaps I've already shown you enough for you to begin to see “where I'm coming from” with the following incomplete summary: *The Human System is organized (or more appropriately, disorganized) by grouping into factions, with each faction vying to survive in a hostile environment and trying to outsmart competing factions – by capturing the benefits of cooperation (in part by punishing cheaters), by utilizing the advances of relatively few innovators, almost invariably by raping their environment, and by trying to gain advantages through manipulating political processes*.
- In **X7**, considerations about organizational schemes at the global scale led to my wanting to show you opinions of some other authors about humanity's possible future, specifically: Bostrom's estimate that humans will become extinct (for which he estimates a probability of at least 25%, ☹) and Naff's suggestion that if we do evolve, then our progeny will be essentially gods (☺).

But before commenting more on those possibilities (which I'll do later in this chapter), with a favorable outcome depending on our political “acumen” (i.e., “the ability to make good judgments and quick decisions”), I first want to add a few additional comments about humanity's goals, since the goal of all politics is to set and then to accomplish goals!

* Go to other chapters via

During the past multi-thousands of years, many attempts have been made to describe humanity's prime goal explicitly. Immediately below, I'll list some examples of such "goal statements" and add a few comments about inadequacies in (or caveats for) each.

- *Religious dogma, as given in any of the many "holy books"* [the essence of any of which being that the goal is to serve the religion's god (or gods), of course by providing the religion's clerics with whatever they desire; such nonsense has polluted humanity for at least the past 5,000 years; later in this chapter, I'll provide some estimates for how much longer I think such nonsense, such personal stupidity and clerical cupidity (i.e., "greed for money and possessions" – and power), will persist and how its demise might be hastened]
- *Homer's idea of "peace and plenty" or "peace and prosperity"* [which requires careful evaluations to develop ways to measure both 'peace' and 'plenty' (or 'prosperity') and to determine both how much prosperity this poor old world of ours can provide how many people and what kind of prosperity should be sacrificed to attain what kind of peace]
- *Intelligent application of the Utilitarian Principle:¹ "the greatest good for the greatest number"* [which requires careful definitions and comparisons of different 'goods' and the need to protect "basic rights" of everyone – rights that surely are to be included as some of the "greatest goods" but which in turn requires careful consideration of associated responsibilities, as I'll try to show you in later chapters, e.g., in X11, dealing with "EXpropriating Rights"]
- *Knowledgeable application of Jefferson's concept of "life, liberty, and the pursuit of happiness"* [which requires understanding of both the responsibilities – or constraints – associated with "liberty" and the necessary constraints on our goals, progress toward which provide us "happiness signals", as I've described in earlier chapters]
- *Sensible realization of France's motto "Liberty, Equality, and Fraternity"* [in which 'equality' should be interpreted as "equal opportunity"]
- *Realization of the humanist concept to "expand and exploit knowledge to benefit humanity"* [which requires serious consideration of 'benefit'], and
- *Achievement of the goal of many "modernists", i.e., "to strive to reach one's full potential – to help as many people as possible to reach their full potential – to help still others"* [which, however, begs the questions "their full potential to help others" to do what?].

¹ Dear: As I'll show you later, the Utilitarian philosophy, based on the "pleasure principle" of Epicurus (and recall Jefferson's claim: "I am an Epicurean!"), was primarily developed by Jeremy Bentham (1748 – 1832) and John Stuart Mill (1806 – 1873).

As I already mentioned, I'd suggest that all such goal statements (save, of course, for silly religious goals) can be collapsed (and their caveats eliminated) into the simple statement of humanity's goal as interpreted by Humanists: *to try to solve our problems more intelligently*. Other ways to try to describe humanity's goal might be: *to help humanity not only survive but to thrive – to help intelligence evolve*.

In whatever form the Humanist's goal is stated, I wouldn't be surprised if more than half of all humans has already accepted such a goal, although as far as I know, the goal has not yet been given in a concise and easily remembered manner – and my attempts notwithstanding, probably still hasn't! I should also add the obvious statement: to solve our problems more intelligently we must become more competent at predicting unintended consequences (and then advertising and advertizing them!); in particular, it's not intelligent to pursue solutions that cause more problems than they solve (☹), e.g., all religious “solutions”!

Furthermore (and importantly) even though all humans (and even all life forms) seem to have the same prime goal (to solve their problems), yet in the past, not only have so many humans mistakenly concluded that their prime problem was to placate their god (or gods) but also, relatively few (if any) worldwide problems have been recognized as a common threat to all humans. Therefore, no particular set of problems has been widely recognized as the prime problem to be solved; consequently, such problems obviously didn't precipitate recognition that humanity has the important goal of solving such worldwide problems. During the past century or so, however, and in part because of advances in communications, most humans have become aware of a huge number of worldwide problems.

In turn, most of these worldwide problems are related to the following:

- **Explosion of the “population bomb”** (e.g., starvation, unemployment, economic insecurity, decrease in “the quality of life”, overcrowding, devaluation of life, poverty, disease, despair, drug addiction, organized crime, violence, illegal immigration...),
- **Rampant consumerism** (and associated resource depletion, economic inflation, environmental destruction, species extinction, impaction of globalization on cultural norms – including associated threats to powers held by religious leaders and their reactions, e.g., promoting terrorism),

- Resistance to democratization and expansion of human rights by those profiting from maintaining the *status quo* (e.g., fundamentalist clerics in Islam and Christianity), and
- The explosion of ways to maim and kill massive numbers of people (e.g., with chemical, biological, and nuclear weapons – although most casualties have been caused by “conventional weapons”, including automatic rifles, land mines, plastic explosives, and bombs, including “smart bombs”).

Further, many environmental damages (such as depletion of stratospheric ozone, species extinction, resource depletion, consequences of global warming) are worldwide problems partly because individual groups can no longer just migrate to pristine sites. Similar is the case for problems of worldwide poverty, lack of peace and prosperity with justice, dangers (from epidemics such as AIDS and bird flu, to wars waged with nuclear and biological weapons), and so on. In most cases, worldwide problems obviously require worldwide involvement to find solutions, a topic that requires examining operation of the Human System at the global scale, which in turn requires examining politics – especially, global-scale politics.

Unfortunately, though, and as I already wrote in **X6** (dealing with organization of the Human System), “the subject of politics is huge. It’s so huge that I want to tackle politics just one piece at a time, as I’ll be doing in subsequent **X**-chapters.” In **X6**, I quoted from Peter Corning’s essay entitled “The Evolution of Politics”, which was originally published as a chapter in the first volume of *Handbook of Evolution*. Here, to begin to show you some of the major problems even in single nations and with democratic or representative governments – problems that are even more acute at the global scale – I first want to show you at least a little about:

DIVISIVENESS CAUSED BY POLITICAL FACTIONS.

According to my dictionary, a ‘faction’ is a “smaller, organized, dissenting groups within a larger one.” The relative size of such groups (or subgroups) however, is not so significant as their different goals. Note that ‘faction’ is a word derived “in the late 15th Century via French from Latin *factio(n-)*, from *facere* meaning ‘do, make’.” Relative to the influence of (and importance of) various factions, Dear, if you haven’t read them already, I hope you’ll soon take the time to read *The Federalist Papers*, available on the internet courtesy the wonderful “Project Gutenberg”, which has put so many important books and documents on the internet.

* Go to other chapters via

<http://zenofzero.net/>

The Federalist Papers, which collectively sum to about 400 pages of rather dense text, were newspaper articles published between October 1787 and August 1788 by Alexander Hamilton, James Madison, and/or John Jay. Some articles have more than one author; for some articles, the author hasn't been discerned; all were written under the pseudonym "Publius". John Jay was the first chief justice of the US, James Madison is generally regarded as "the father of the Constitution", and Alexander Hamilton is generally regarded as most responsible for building a strong Federal government. The overall purpose of their articles was to try to convince citizens of New York State to ratify the new "Constitution" (adopted by the September 1787 Constitutional Convention in Philadelphia), which was proposed to replace the 1781 "Articles of Confederation."

The Federalist Papers are important, Dear, because from them you can gain some appreciation for both the wisdom of and the debates among the participants who crafted our Constitution, which was finally ratified in 1789; the *Papers* continue to be important, because they address attempts to solve fundamental problems that still plague humanity. Thus, Dear, while you read the quotation below, I hope you'll frequently pause to relate the ideas to current and future problems associated with governance.

How the proposed new government would attempt to overcome the problem of factions was addressed by James Madison (1751–1836) in *FEDERALIST No. 10*, entitled "The Union as a Safeguard Against Domestic Faction and Insurrection." It's quoted below, to which I've italicized some phrases (to encourage your attention to them) and added some notes in brackets.

Among the numerous advantages promised by a well constructed Union, none deserves to be more accurately developed than its tendency *to break and control the violence of faction*. The friend of popular governments never finds himself so much alarmed for their character and fate, as when he contemplates their propensity to *this dangerous vice*. He will not fail, therefore, to set a due value on any plan which, without violating the principles to which he is attached, provides a proper cure for it. The instability, injustice, and confusion introduced into the public councils, have, in truth, been the mortal diseases under which popular governments have everywhere perished; as they continue to be the favorite and fruitful topics from which the adversaries to liberty derive their most specious declamations [and, Dear, this "dangerous vice" and "mortal disease" may yet destroy the US, other nations, the UN, and maybe even humanity!].

The valuable improvements made by the American constitutions on the popular models, both ancient and modern, cannot certainly be too much admired; *but it would be an unwarrantable partiality to contend that they have as effectually obviated the danger on this side, as was wished and expected.* Complaints are everywhere heard from our most considerate and virtuous citizens, equally the friends of public and private faith, and of public and personal liberty, that our governments are too unstable, that the public good is disregarded in the conflicts of rival parties, and that *measures are too often decided, not according to the rules of justice and the rights of the minor party, but by the superior force of an interested and overbearing majority.*

However anxiously we may wish that these complaints had no foundation, the evidence of known facts will not permit us to deny that they are in some degree true. It will be found, indeed, on a candid review of our situation, that some of the distresses under which we labor have been erroneously charged on the operation of our governments; but it will be found, at the same time, that other causes will not alone account for many of our heaviest misfortunes; and, particularly, for that prevailing and increasing distrust of public engagements, and alarm for private rights, which are echoed from one end of the continent to the other. These must be chiefly, if not wholly, *effects of the unsteadiness and injustice with which a factious spirit has tainted our public administrations.*

By a faction, I understand a number of citizens, whether amounting to a majority or a minority of the whole, who are united and actuated by some common impulse of passion, or of interest, adverse to the rights of other citizens, or to the permanent and aggregate interests of the community.

There are two methods of curing the mischiefs of faction: the one, by removing its causes; the other, by controlling its effects. There are again two methods of removing the causes of faction: the one, by destroying the liberty which is essential to its existence; the other, by giving to every citizen the same opinions, the same passions, and the same interests.

It could never be more truly said than of the first remedy, that it was worse than the disease. Liberty is to faction what air is to fire, an aliment without which it instantly expires. But it could not be less folly to abolish liberty, which is essential to political life, because it nourishes faction, than it would be to wish the annihilation of air, which is essential to animal life, because it imparts to fire its destructive agency. [Sorry for the interruption, Dear, but isn't that an amazing sentence!]

The second expedient is as impracticable as the first would be unwise. *As long as the reason of man continues fallible, and he is at liberty to exercise it, different opinions will be formed.* As long as the connection subsists between his reason and his self-love, his opinions and his passions will have a reciprocal influence on each other; and the former will be objects to which the latter will attach themselves.

The diversity in the faculties of men, from which the rights of property originate, is not less an insuperable obstacle to a uniformity of interests. The protection of these faculties is the first object of government. From the protection of different and unequal faculties of acquiring property, the possession of different degrees and kinds of property immediately results; and from the influence of these on the sentiments and views of the respective proprietors, ensues a division of the society into different interests and parties.

The latent causes of faction are thus sown in the nature of man; and we see them everywhere brought into different degrees of activity, according to the different circumstances of civil society. A zeal for different opinions concerning religion, concerning government, and many other points, as well of speculation as of practice; an attachment to different leaders ambitiously contending for pre-eminence and power; or to persons of other descriptions whose fortunes have been interesting to the human passions, have, in turn, divided mankind into parties, inflamed them with mutual animosity, and rendered them much more disposed to vex and oppress each other than to co-operate for their common good. So strong is this propensity of mankind to fall into mutual animosities, that where no substantial occasion presents itself, the most frivolous and fanciful distinctions have been sufficient to kindle their unfriendly passions and excite their most violent conflicts.

[Sorry to interrupt you again, Dear, but please re-read that paragraph, since it provides a good summary of “the human predicament” from a “systems viewpoint”. Thus, a systems analyst would probably say: “Good! There’s an overall goal of the system, stated to be: “to co-operate for [the] common good.” Then, however, the analyst would need to ask: “Define ‘common good’.” Whereupon, the system would likely break into factions, each with its own definition of ‘common good’, and therefore, unable to cooperate!]

But the most common and durable source of factions has been the various and unequal distribution of property. Those who hold and those who are without property have ever formed distinct interests in society. Those who are creditors, and those who are debtors, fall under a like discrimination. A landed interest, a manufacturing interest, a mercantile interest, a moneyed interest, with many lesser interests, grow up of necessity in civilized nations, and divide them into different classes, actuated by different sentiments and views. The regulation of these various and interfering interests forms the principal task of modern legislation, and involves the spirit of party and faction in the necessary and ordinary operations of the government.

[Actually, Dear, in modern societies (with our various types of “social safety nets”), it may no longer be correct to say that “unequal distribution of property” is “the most common and durable source of factions” – although it may still dominate for the entire Human System (divided, as it now commonly is, into “developed” and “underdeveloped” nations). In the US, in particular, different factions of people seem to be primarily derived from differences in philosophies (or worldviews), while other factions (other “special interests”) develop not so much from unequal distribution of

existing “property” as from perceived opportunities and hindrances to the economic vitality of the special interests, e.g., different industries, different labor groups, professional groups, etc.]

No man is allowed to be a judge in his own cause, because his interest would certainly bias his judgment, and, not improbably, corrupt his integrity. With equal, nay with greater reason, a body of men are unfit to be both judges and parties at the same time; *yet what are many of the most important acts of legislation, but so many judicial determinations, not indeed concerning the rights of single persons, but concerning the rights of large bodies of citizens? And what are the different classes of legislators but advocates and parties to the causes which they determine? Is a law proposed concerning private debts? It is a question to which the creditors are parties on one side and the debtors on the other. Justice ought to hold the balance between them. Yet the parties are, and must be, themselves the judges; and the most numerous party, or, in other words, the most powerful faction must be expected to prevail.* Shall domestic manufactures be encouraged, and in what degree, by restrictions on foreign manufactures? are questions which would be differently decided by the landed and the manufacturing classes, and probably by neither with a sole regard to justice and the public good.

[So here again, Dear, root problems about goals and definitions arise. Madison’s premiss is that the goals are “justice” and “public good”, but definitions are again lacking. I’ll return to the problem of social justice in later X-chapters (e.g., see X10). As for the concept of “public good”, although it may seem obvious (as dictated by Nature) that “the good” is to survive, again humans have managed to “screw up” Nature’s clear directive – with some humans concluding that the “really good” is to survive forever! And of course I’ll return to this problem in later X-chapters, e.g., those dealing with education, in which the emphasis will be consistent with Socrates’ summary: “There is only one good, knowledge (or willingness to learn) and one evil, ignorance (or, refusal to learn).”]

The apportionment of taxes on the various descriptions of property is an act which seems to require the most exact impartiality; yet there is, perhaps, no legislative act in which greater opportunity and temptation are given to a predominant party to trample on the rules of justice. *Every shilling with which they overburden the inferior number, is a shilling saved to their own pockets.* It is in vain to say that enlightened statesmen will be able to adjust these clashing interests, and render them all subservient to the public good. Enlightened statesmen will not always be at the helm. Nor, in many cases, can such an adjustment be made at all without taking into view indirect and remote considerations, which will rarely prevail over the immediate interest which one party may find in disregarding the rights of another or the good of the whole.

The inference to which we are brought is, that the CAUSES of faction cannot be removed, and that relief is only to be sought in the means of controlling its EFFECTS.

[And already from that observation, Dear, you might see evidence for an important generalization about a principal “organizational principle” of the current Human System: **Humanity is organized into subgroups of competing factions, with interfactional competition only partially constrained.** Later, I’ll be showing you more evidence supporting that generalization, but if you think about it, you may conclude that you already have found sufficient evidence on your own!]

If a faction consists of less than a majority, relief is supplied by the republican principle, which enables the majority to defeat [the minority’s] sinister views by regular vote. It may clog the administration, it may convulse the society; but it will be unable to execute and mask its violence under the forms of the Constitution. [And here, Dear, you can see a major difficulty – and bias in Madison’s writing: who is to say that the minority’s view is “sinister”?! And of course the answer is “the majority”, but is that the “correct” answer?! What’s meant by ‘correct’?!]

When a majority is included in a faction, the form of popular government [democracy], on the other hand, enables it to sacrifice (to its ruling passion or interest) both the public good and the rights of other citizens. To secure the public good and private rights against the danger of such a faction, and at the same time to preserve the spirit and the form of popular government, is then the great object to which our inquiries are directed.

Let me add that it is the great desideratum by which this form of government can be rescued from the opprobrium under which it has so long labored, and be recommended to the esteem and adoption of mankind. *By what means is this object attainable? Evidently by one of two only. Either the existence of the same passion or interest in a majority at the same time must be prevented, or the majority, having such coexistent passion or interest, must be rendered, by their number and local situation, unable to concert and carry into effect schemes of oppression.*

[Well, Dear, if you think that Madison is here skating on thin ice, then I’d tend to agree with you – and so did many others, which is why a Bill of Rights was added to the Constitution, as its first Ten Amendments, ratified in 1791. But the problems were only partially solved with those Amendments, restricting the possibility of the majority “to defeat [the minority’s] sinister views”, e.g., on freedom of speech or assembly or...! Meanwhile, though, Madison’s premiss that there was some “common good” that the majority would thwart (as a “faction”!) again begs the question: what is this “common good” that the majority doesn’t recognize? Who defines the “common good”? What is it “good” for? What’s the objective? As you might conclude from what follows, Madison didn’t address such questions – and as you might conclude from your own experiences, such questions have never been adequately addressed. I’ll return to them in later X-chapters.]

If the impulse and the opportunity [of the majority] be suffered to coincide, we well know that *neither moral nor religious motives can be relied on as an adequate*

control. They [moral or religious motives] are not found to be such [control] on the injustice and violence of individuals, and lose their efficacy in proportion to the number combined together, that is, in proportion as their efficacy becomes needful. [What I think he means is that a mob, even a religious mob, will behave like a mob.]

From this view of the subject it may be concluded that a pure democracy, by which I mean a society consisting of a small number of citizens, who assemble and administer the government in person, can admit of no cure for the mischiefs of faction. A common passion or interest will, in almost every case, be felt by a majority of the whole; a communication and concert result from the form of government itself; and there is nothing to check the inducements to sacrifice the weaker party or an obnoxious individual. Hence it is that such democracies have ever been spectacles of turbulence and contention; have ever been found incompatible with personal security or the rights of property; and have in general been as short in their lives as they have been violent in their deaths. [In short, he seems to be saying, that any “pure democracy” (such as that of ancient Athens) will degenerate to mob rule.]

Theoretic politicians, who have patronized this species of government, have erroneously supposed that by reducing mankind to a perfect equality in their political rights, they would, at the same time, be perfectly equalized and assimilated in their possessions, their opinions, and their passions. *A republic, by which I mean a government in which the scheme of representation takes place, opens a different prospect, and promises the cure for which we are seeking.* [Well, I’ll add the snide remark that, although a representative government (a “republic”) may hold the promise of “the cure”, another 200 years of experience with such governments has demonstrated that it doesn’t work – at least, not in any form currently existing!]

Let us examine the points in which it [a representative government] varies from pure democracy, and we shall comprehend both the nature of the cure and the efficacy which it must derive from the Union. The two great points of difference between a democracy and a republic are: first, the delegation of the government, in the latter, to a small number of citizens elected by the rest; secondly, the greater number of citizens, and greater sphere of country, over which the latter may be extended.

The effect of the first difference [a small number of elected citizens] is, on the one hand, to refine and enlarge the public views, by passing them through the medium of a chosen body of citizens, whose wisdom may best discern the true interest of their country, and whose patriotism and love of justice will be least likely to sacrifice it to temporary or partial considerations. [Would that it were so! Would that we elected only people who were “wise” and possessed a “love of justice” – rather than those who are most competent at hustling votes with shallow promises!] Under such a regulation, it may well happen that the public voice, pronounced by the representatives of the people, will be more consonant to the public good than if pronounced by the people themselves, convened for the purpose. [Assuming not only that the representatives know what’s meant by “public good” but also that they’re really committed to it – rather than to their own re-election, for their own good!]

On the other hand, the effect may be inverted. Men of factious tempers, of local prejudices, or of sinister designs, may, by intrigue, by corruption, or by other means, first obtain the suffrages, and then betray the interests, of the people. [Thus, Madison was alert to what might happen – and has happened.] The question resulting is, whether small or extensive republics are more favorable to the election of proper guardians of the public weal; and it is clearly decided in favor of the latter [i.e., by “extensive republics”] by two obvious considerations[.]

In the first place, it is to be remarked that, however small the republic may be, the representatives must be raised to a certain number, in order to guard against the cabals of a few; and that, however large it may be, they must be limited to a certain number, in order to guard against the confusion of a multitude. Hence, the number of representatives in the two cases not being in proportion to that of the two constituents, and being proportionally greater in the small republic, it follows that, if the proportion of fit characters be not less in the large than in the small republic, the former will present a greater option, and consequently a greater probability of a fit choice.

[That analysis may have been appropriate for Madison’s time period (in a time when communications throughout a large region were in such a rudimentary state (by letters, carried by “pony express”), but ever since the telegraph was invented (an invention stimulated by many people and widely deployed during the 1850s and 60s), and of course with our current communication systems, Madison’s analysis is no longer valid: even the concepts of “small republic” vs. “large republic” have lost their meanings; across the republic, labor unions or industry groups (for example) can essentially instantaneously speak with a unified, factional, voice.]

In the next place, as each representative will be chosen by a greater number of citizens in the large than in the small republic, it will be more difficult for unworthy candidates to practice with success the vicious arts by which elections are too often carried; and the suffrages of the people being more free, will be more likely to center in men who possess the most attractive merit and the most diffusive and established characters. [Again: would that it were so!]

It must be confessed that in this, as in most other cases, there is a mean, on both sides of which inconveniences will be found to lie. By enlarging too much the number of electors, you render the representatives too little acquainted with all their local circumstances and lesser interests; as by reducing it too much, you render him unduly attached to these, and too little fit to comprehend and pursue great and national objects. The federal Constitution forms a happy combination in this respect; the great and aggregate interests being referred to the national, the local and particular to the State legislatures.

The other point of difference is, the greater number of citizens and extent of territory which may be brought within the compass of republican than of democratic government; and it is this circumstance principally which renders factious

combinations less to be dreaded in the former than in the latter. The smaller the society, the fewer probably will be the distinct parties and interests composing it; the fewer the distinct parties and interests, the more frequently will a majority be found of the same party; and the smaller the number of individuals composing a majority, and the smaller the compass within which they are placed, the more easily will they concert and execute their plans of oppression. Extend the sphere, and you take in a greater variety of parties and interests; you make it less probable that a majority of the whole will have a common motive to invade the rights of other citizens; or if such a common motive exists, it will be more difficult for all who feel it to discover their own strength, and to act in unison with each other. [Again: an analysis invalidated by modern communications; witness the “invasion” by the “Christian Reich”.]

Besides other impediments, it may be remarked that, where there is a consciousness of unjust or dishonorable purposes, communication is always checked by distrust in proportion to the number whose concurrence is necessary. Hence, it clearly appears that the same advantage which a republic has over a democracy, in controlling the effects of faction, is enjoyed by a large over a small republic, is enjoyed by the Union over the States composing it.

Does the advantage consist in the substitution of representatives whose enlightened views and virtuous sentiments render them superior to local prejudices and schemes of injustice? It will not be denied that the representation of the Union will be most likely to possess these requisite endowments. Does it consist in the greater security afforded by a greater variety of parties, against the event of any one party being able to outnumber and oppress the rest? In an equal degree does the increased variety of parties comprised within the Union, increase this security. Does it, in fine, consist in the greater obstacles opposed to the concert and accomplishment of the secret wishes of an unjust and interested majority? Here, again, the extent of the Union gives it the most palpable advantage.

The influence of factious leaders may kindle a flame within their particular States, but will be unable to spread a general conflagration through the other States. A religious sect may degenerate into a political faction in a part of the Confederacy; but the variety of sects dispersed over the entire face of it must secure the national councils against any danger from that source. [Once again: would that it were so!] A rage for paper money [!], for an abolition of debts, for an equal division of property, or for any other improper or wicked project, will be less apt to pervade the whole body of the Union than a particular member of it; in the same proportion as such a malady is more likely to taint a particular county or district, than an entire State.

In the extent and proper structure of the Union, therefore, we behold a republican remedy for the diseases most incident to republican government. And according to the degree of pleasure and pride we feel in being republicans, ought to be our zeal in cherishing the spirit and supporting the character of Federalists.

In brief, Madison argued that there would be strength both in representation and in diversity, but I must admit that, for me, his argument (that such representation would be able to constrain factions) is not overwhelmingly persuasive—and as I'll be showing you, the data suggest that his analysis was dated. But my criticism certainly isn't meant to distract from Madison's genius, for I expect that no one could have foreseen the skill (using modern communication tools) of manipulating public opinion by Public Relations firms, such as those that made Madison Avenue famous (or "notorious").

Be that as it has become, additional generalizations about organizational (and "disorganizational") principles for the Human System seem to be available. Thus, extending the analysis that I developed two chapters ago, I'd say: **Not only do humans learn and communicate how to outsmart our competitors (by capturing the benefits of cooperation, punishing "cheaters", and by utilizing the discoveries of relatively few, brilliant innovators), but humans form into a huge variety of subgroups or factions, each with specific goals, operations, and organizational principles.**

The variety of goals is enormous, not only spanning such major topics as economics and security but also to promote (or hinder) a huge number of different ideas, from capitalism *vs.* communism to science *vs.* religion. Examples range from street gangs to the Mormons and from the Muslim Brotherhood to the International Geophysical Union. In former times, the extent of each faction was normally constrained by communications (and can still be inhibited by difference in languages), but with modern communication systems, their extent can be global (witness Al Qaeda's use of the internet to organize terrorists and their operations).

Many such factions compete, argue, and even go to war against other factions. Thereby, such "factionization" of humanity can destabilize the human system, but in other cases, it can promote growth and stability. Thus, on the one hand, the Human System is generally more stable if individuals belong to more than one faction (e.g., Communists who are also ecological scientists and avid readers of Shakespeare, or Muslims who are also Capitalists and fans of rap "music"). And on the other hand, even confrontations between factions can promote growth, for example, an environmental faction can challenge some industrial faction (e.g., over the release of some environmentally damaging chemical) and the result can lead to not only a safer environment but also a new industry.

Now, Dear, probably obviously, there's "no way" that I can provide you with thorough descriptions of all the "factionizations" of the modern world. Even within our society, there are literally thousands of factions: you name an issue, and you'll find factions promoting opposite sides! In subsequent **X**-chapters, I'll comment on many such factions. In this chapter, consistent with the themes that I've been addressing in the past few chapters, I'll mention only three, all dealing with contentious issues associated with attempts to establish worldwide peace and prosperity.

SOME GLOBAL-SCALE PROBLEMS

Current confrontations between "environmental" and "industrial" factions reveal one of the organizational (or "disorganizational") principles of the Human System, one that is currently almost as divisive and contentious as the one between terrorists and the rest of us, or between religious people and the rest of us. Its roots can be traced to what's called "The Tragedy of the Commons" – and, Dear, if you haven't already read the book with that title by Garrett Hardin (I'm fairly sure that your dad has my copy), then I encourage you to do so.

1. The Tragedy of the Commons

As I recall Hardin's description of the history of the tragedy of the commons, the tragedy was identified centuries ago in England when herders crazed their animals on common pastures (i.e., pastures belonging to everyone or to "the commons"). As a result, overgrazing occurred, and the tragedy was that, although no doubt all herders realized that the pastures were being overgrazed, there were no economic incentives for individual herders to limit their use of the commons; instead, there were economic incentives to continue (since providing their herds with some pasture was better than providing them with none). Consequently, the commons continued to deteriorate.

Similar occurs with industries throughout the world today: if the industries are unregulated, they have economic incentives (including their very survival) to maximize the free use of any commons (such as the atmosphere for carrying away pollutants, water for cleansing and cooling their operations, land for burying wastes, as much raw material as possible at least possible costs, etc.). Stated differently, industries have economic incentives to pass off costs of the use of the commons to consumers as "hidden costs" (hidden in the costs associated with air, water, and land pollution, depletion

* Go to other chapters *via*

of irreplaceable resources, damages to ecosystems, and so on). The tragedy, then, is that economic values of “the commons” are not appropriately included in the cost of production of goods and services.

Now, Dear, once again it’s probably obvious that much more needs to be said about how to try to remedy the tragedy of the commons, but also once again, I want to defer digging deeper at this time. In subsequent **X**-chapters (see especially **X-35** dealing with “EXtraterrestrial Perspectives”) I’ll provide you with additional details. Here, instead, I want to move on to other (but associated) problems, namely, the need to educate people about the tragedy of the commons and how to promote sustainable development.

2. The Need for Sustainable Development

To illustrate resulting problems of inadequately accounting for environmental values (in part because of incomplete understanding of the environment), to emphasize the important need for improved communications, and to fulfill a promise that I made in an earlier **X**-chapter (to show you more writings by Donella Meadows), consider the following (long!) quotation. Recall that she was co-author of the two principal books describing major applications of MIT’s model of the Human System. After spending most of her career in such efforts, she exchanged trying to simulate the system with trying to stimulate the system! She described her “conversion” as follows:²

IT WAS 1985. Ronald Reagan had just been elected to a second term. The environment had disappeared as a subject of public discourse; people who lived in poverty were all welfare cheats who refused to get an honest job; the rest of the world was the backyard to which America crowned its perpetual “Morning”. I couldn’t stand it any more. I resigned my professorship in environmental studies at Dartmouth College to become a newspaper columnist.

I did it with no inside knowledge of the journalistic world. Until then I had met the press only as an object of reporting, and the meetings had been unsettling.

The press knew of me because the media find the field I work in – called system dynamics – fascinating. System dynamics is a set of techniques for thinking and computer modeling that helps its practitioners begin to understand complex systems – systems such as the human body or the national economy or the earth’s climate.

² Dear: I copied this quotation from the internet; you can find it using its title “System Dynamics Meets the Press”; in reality, it’s “an excerpt from the book *The Global Citizen* by Donella H. Meadows (pp. 1-12, Island Press, Washington, DC, 1991).”

Systems tools help us keep track of multiple interconnections; they help us see things whole. Because much of conventional wisdom comes from seeing things in parts and focusing on one small part at a time, system dynamicists tend to have surprising points of view. They generate a lot of controversy. Hence the fascination of the press.

In 1969 I watched Jay Forrester (my mentor at MIT, the founder of system dynamics) try to explain to a nation in the midst of urban crisis why cities would be better off if governments pulled down public housing instead of constructing it. As you might expect, that message infuriated city planners. The ensuing ruckus attracted the media like sharks to blood in the water.

By 1970 I was involved with a group at MIT making a system dynamics model of world population growth and economic growth. The press saw it as a global crystal ball, in which to foresee the future of everything. What an irresistible attraction! *Playboy*, of all publications, was the first to do an article about our work. There it was – an analysis of population growth, economic growth, pollution, resource depletion – right there among the naked ladies. A year or so later, when our book, *The Limits to Growth*, came out, we were given three whole minutes on the “Today” show to explain the growth, overshoot, and collapse of the world economy, just after a mouthwash commercial and just before a demonstration by the British dart-throwing champion. From then on I watched the media misinterpret our book, label it a prophecy of doom, batter it, and discredit it. That was a painful experience, but one that led me to think long and deep about the crucial role of information and information-purveyors in the modern world.

My experiences with the media continued, sometimes funny, sometimes frustrating, occasionally fruitful. I kept coming back to the press because I thought my field provided valuable insights about the world. I wanted those insights to be spread widely – I knew they *must* be spread widely. System dynamics makes clear the overarching power of deep, socially shared ideas about the nature of the world. Out of those ideas arise our systems – government systems, economic systems, technical systems, family systems, environmental systems.

...if we want to bring about the thoroughgoing restructuring of systems that is necessary to solve the world’s gravest problems – poverty, pollution, and war – the first step is thinking *differently*. Everybody thinking differently. The whole society thinking differently. There is only one force in the modern world that can cause the entire public to think differently. That force is the mass media.

That was my reasoning when I set out to be a columnist. I was finding the state of the world and the feeble responses of policy makers intolerable. I didn’t think that more writing for academics or preaching to the converted would help. I wanted to see a system-based, globally oriented, long-term viewpoint on the editorial pages of the newspapers. I kept waiting around for someone else to write it, but no one did. So I did.

I called the column “The Global Citizen” to emphasize the fact that my readers and I are part of an interconnected world system, whether we want to be or not. After five years of writing “The Global Citizen”, I’ve learned a lot – about perceptions and paradigms, about the media, and about that wonderful public out there to whom we journalists try to speak. This book is a sample of what I’ve produced. This introduction is a summary of what I’ve learned.

THE PRESENT PARADIGM

A paradigm is not only an *assumption* about how things are; it is also a *commitment* to their being that way. There is an emotional investment in a paradigm because it defines one’s world and oneself. A paradigm shapes language, thought, and perceptions – and systems. In social interactions, slogans, common sayings, the reigning paradigm of the society is repeated and reinforced over and over, many times a day.

Whenever a speaker of an Indo-European language says a sentence, nouns and verbs reinforce the paradigmatic distinction between *things* and *processes* (in some other languages there are only processes). Every time you buy or sell something, you affirm a shared paradigm about the value of money. Every time the president rejoices when the gross national product (GNP) goes up, he strengthens the paradigm of economic growth as an unquestioned good.

Your paradigm is so intrinsic to your mental processes that you are hardly aware of its existence, until you try to communicate with someone with a different paradigm. Listen to an ecologist talk with an economist, a pro-lifer with a pro-choicer, a right-winger with a left-winger. In the difficulties of cross-paradigm discussion, both parties begin to be aware, often uncomfortably, of unspoken, fundamental assumptions they do not share.

System dynamicists were raised in the general culture, of course, long before they learned about system dynamics, so they are not uncomfortable in the normal paradigm of everyday life. But their systems training makes them very aware of the many unsystematic assumptions that permeate societal talk, political thinking, and daily news reports.

Here are a few of the common assumptions of the current social paradigm that seem to me to be clearly unsystematic and problematic. These are the assumptions that disturbed me enough to want to write a newspaper column:

- One cause produces one effect. There must be a single cause, for example, of acid rain, or cancer, or the greenhouse effect. All we need to do is discover and remove it.
- All growth is good – and possible. There are no effective limits to growth.

- There is an “away” to throw things to. When you have thrown something “away”, it’s gone.
- Technology can solve any problem that comes up. There is no cost to technology, no delay in attaining it, no confusion about what kind of technology is needed. Improvements will come through better technology, not better humanity.
- The future is to be predicted, not chosen or created. It happens to us; we do not shape it.
- A problem does not exist or is not serious until it can be measured.
- If something is “economic”, it needs no further justification. E. F. Schumacher writes, “Call a thing immoral or ugly, soul-destroying or a degradation of man, a peril to the peace of the world or to the well-being of future generations; as long as you have not shown it to be ‘uneconomic’, you have not really questioned its right to exist, grow, and prosper.”
- Relationships are linear, nondelayed, and continuous; there are no critical thresholds; feedback is accurate and timely; systems are manageable through simple cause-effect thinking.
- Results can be measured by effort expended – if you have spent more for weapons, you have more security; if you use more electricity, you are better off; if you spend more for schools, your children will be better educated.
- Nations are disconnected from one another, people are disconnected from nature, economic sectors can be developed independently from one another, some parts of a system can thrive while other parts suffer.
- Choices are either/or, not both/and.
- Possession of *things* is the source of happiness.
- Individuals cannot make any difference.
- People are basically bad, greedy, and not to be trusted. Good people and good actions are rare exceptions.
- The rational powers of human beings are superior to their intuitive powers or their moral powers.
- Present systems are tolerable and will not get much worse; alternative systems cannot help but be worse than the ones we’ve got.
- We know what we are doing.

I submit that the above statements are partially or wholly false, that they are implicit or explicit in virtually all public discourse, that they give rise to much of the counterproductive behavior of individuals and institutions, and that the harm done by them is incalculable. The only way I know to throw them into question is to question them, over and over, with as much documentation, clarity, and persuasiveness as possible, in the most visible public forums.

As much as I agree with the principles Donella Meadows promoted (and as much as I am amazed at her contributions), it seems clear that much more is still needed: both more contributions by similarly amazing people and more principles to guide them, especially principles needed to improve global-scale governance and management. Even at smaller-than-global scales, a major complication in governance and management (i.e., in politics) is that there are so many competing goals, including the trio of prime goals being pursued by each member of the group (i.e., survival of themselves, their “families”, and their values).

As a summary from another perspective, when Einstein said “[politics is more difficult than physics](#)”, I don’t think he meant that it was conceptually more difficult. Instead, I think he meant, for one, not only that politics is a field of so many goals but also that it’s so difficult to make any progress toward any of them! Thus, if politics is the process by which group-decisions are made, then if one asks “What decisions?”, the answer is “Whatever!” If one asks “What process?”, the answer is again “Whatever – from democracy to dictatorship”. And if one asks “By whom?”, the answer is still: “Whatever (or by whomever), from animals to philosophers!

In addition, surely Einstein was recognizing that it’s substantially more difficult to perform experiments in politics than in physics; consequently, it’s substantially more difficult to establish defensible general principles. Nonetheless, and ever since the Stone Age, humans (similar to other animals) have formed into “political groups” to try to find intelligent, collective, cooperative solutions to their problems, while each individual in the group continued to pursue his or her trio of survival goals. And I should add that by “intelligent solutions”, I don’t mean “just” the kind of intelligence that can solve math problems, build bridges, explore the structure of matter or the universe, etc., but all types of intelligence: analytic, synthetic, artistic, practical, interpersonal, social, political... But as I already mentioned, what’s new for the modern age is that many of humanity’s problems have a worldwide (or global) scale.

3. Differences Between “What is” and “What Could Be”

To illustrate some current, global-scale problems desperately needing solutions, Dear, consider the following quotation from a book by John Avery (which I encourage you to read) with the stimulating title *Space-Age Science and Stone-Age Politics* [boldface added]. Avery starts his book as follows, from which I hope you’ll gain appreciation for some of the enormous problems now facing humanity – and what practical solutions humans might be able to find, if only appropriate, global-scale management and governance principles can be developed.³

The world as it is, and the world as it could be

[Copied from John Avery’s *Space-Age Science and Stone-Age Politics*]

We need to know where we are going before we can take the first step. So let us begin at the end, and only later return to the question of how that end can be achieved.

I would like to invite you to play a game. The rules are as follows: You should imagine the kind of world you would like to have. It must be a world that is possible – something that would work in practice, if we could only achieve it. Then contrast that ideal world with the world as it is today. For the moment, don’t worry about the question of how to get from here to there.

Some years ago, my friend Keld Helmer-Petersen and I tried this, and came up with the following list, contrasting the world as it is with the world as it could be. Try making your own list. Here is ours:

- In the world as it is, almost a trillion US dollars are spent each year on armaments. In the world as it could be, the enormous sums now wasted on war would be used to combat famine, poverty, illiteracy, and preventable disease.

³ Dear: You can download this book by “clicking on” its title in Avery’s list of publications, given at <http://www.fredsakademiet.dk/ordbog/aord/a220.htm>. There, you can also find the following information about the author: “John Avery received a B.Sc. in theoretical physics from MIT and an M.Sc. from the University of Chicago. He later studied theoretical chemistry at the University of London, and was awarded a Ph.D. there in 1965. He is now Lektor Emeritus, Associate Professor, at the Department of Chemistry, University of Copenhagen. Fellowships, memberships in societies: Since 1990 he has been the Contact Person in Denmark for Pugwash Conferences on Science and World Affairs; Technical Advisor, World Health Organization, Regional Office for Europe (1988–1997); Chairman of the Danish Peace Academy, April 2004.”

- In the world as it is, population is increasing so fast that it doubles every thirty-nine years. Most of this increase is in the developing countries, and in many of these, the doubling time is less than twenty-five years. Famine is already present, and it threatens to become more severe and widespread in the future. In the world as it could be, population would be stabilized at a level that could be sustained comfortably by the world's food and energy resources. Each country would be responsible for stabilizing its own population, and no country would be allowed to export its problem by sending large numbers of its citizens abroad.
- In the world as it is, the nuclear weapons now stockpiled are sufficient to kill everyone on earth several times over. Nuclear technology is spreading, and many politically unstable countries have recently acquired nuclear weapons or may acquire them soon. Even terrorist groups or organized criminals may acquire such weapons, and there is an increasing danger that they will be used. In the world as it could be, both the manufacture and the possession of nuclear weapons by individual nations would be prohibited. The same would hold for other weapons of mass destruction.
- In the world as it is, 40% of all research funds are used for projects related to armaments. In the world as it could be, research in science and engineering would be redirected towards solving the urgent problems now facing humanity, such as the development of better methods for treating tropical diseases, new energy sources, and new agricultural methods. An expanded UNESCO would replace national military establishments as the patron of science and engineering.
- In the world as it is, gross violations of human rights are common. These include genocide, torture, summary execution, and imprisonment without trial. In the world as it could be, the International Human Rights Commission would have far greater power to protect individuals against violations of human rights.
- In the world as it is, armaments exported from the industrial countries to the Third World amount to a value of roughly 17 billion dollars per year. This trade in arms increases the seriousness and danger of conflicts in the less developed countries, and diverts scarce funds from their urgent needs. In the world as it could be, international trade in arms would be strictly limited by enforceable laws.
- In the world as it is, an estimated 10 million children die each year from starvation or from diseases related to malnutrition. In the world as it could be, the international community would support programs for agricultural development and famine relief on a much larger scale than at present.
- In the world as it is, diarrhea spread by unsafe drinking water kills an estimated six million children every year. In the world as it could be, the installation of safe and adequate water systems and proper sanitation in all parts of the world would have a high priority and would be supported by ample international funds.

- In the world as it is, malaria, tuberculosis, AIDS, cholera, schistosomiasis, typhoid fever, typhus, trachoma, sleeping sickness and river blindness cause the illness and death of millions of people each year. For example, it is estimated that 200 million people now suffer from schistosomiasis and that 500 million suffer from trachoma, which often causes blindness. In Africa alone, malaria kills more than a million children every year. In the world as it could be, these preventable diseases would be controlled by a concerted international effort. The World Health Organization would be given sufficient funds to carry out this project.
- In the world as it is, the rate of illiteracy in the 25 least developed countries is 80%. The total number of illiterates in the world is estimated to be 800 million. In the world as it could be, the international community would aim at giving all children at least an elementary education. Laws against child labor would prevent parents from regarding very young children as a source of income, thus removing one of the driving forces behind the population explosion. The money invested in education would pay economic dividends after a few years.
- In the world as it is, there is no generally enforceable system of international law, although the International Criminal Court is a step in the right direction. In the world as it could be, the General Assembly of the United Nations would have the power to make international laws. These laws would be binding for all citizens of the world community, and the United Nations would enforce its laws by arresting or fining individual violators, even if they were heads of states. However, the laws of the United Nations would be restricted to international matters, and each nation would run its own internal affairs according to its own laws.
- In the world as it is, each nation considers itself to be ‘sovereign’. In other words, every country considers that it can do whatever it likes, without regard for the welfare of the world community. This means that at the international level we have anarchy. In the world as it could be, the concept of national sovereignty would be limited by the needs of the world community. Each nation would decide most issues within its own boundaries, but would yield some of its sovereignty in international matters.
- In the world as it is, the system of giving ‘one nation one vote’ in the United Nations General Assembly means that Monaco, Liechtenstein, Malta, and Andorra have as much voting power as China, India, the United States and Russia combined. For this reason, UN resolutions are often ignored. In the world as it could be, the voting system of the General Assembly would be reformed...
- In the world as it is, the United Nations has no reliable means of raising revenues. In the world as it could be, the United Nations would have the power to tax international business transactions, such as exchange of currencies. Each member state would also pay a yearly contribution, and failure to pay would mean loss of voting rights.

- In the world as it is, young men are forced to join national armies, where they are trained to kill their fellow humans. Often, if they refuse for reasons of conscience, they are thrown into prison. In the world as it could be, national armies would be very much reduced in size. A larger force of volunteers would be maintained by the United Nations to enforce international laws. The United Nations would have a monopoly on heavy armaments, and the manufacture or possession of nuclear weapons would be prohibited.
- In the world as it is, young people are indoctrinated with nationalism. History is taught in such a way that one's own nation is seen as heroic and in the right, while other nations are seen as inferior or as enemies. In the world as it could be, young people would be taught to feel loyalty to humanity as a whole. History would be taught in such a way as to emphasize the contributions that all nations and all races have made to the common cultural heritage of humanity.
- In the world as it is, young people are often faced with the prospect of unemployment. This is true both in the developed countries, where automation and recession produce unemployment, and in the developing countries, where unemployment is produced by overpopulation and by lack of capital. In the world as it could be, the idealism and energy of youth would be fully utilized by the world community to combat illiteracy and disease, and to develop agriculture and industry in the Third World. These projects would be financed by the UN...
- In the world as it is, women form more than half of the population, but they are not proportionately represented in positions of political and economic power or in the arts and sciences. In many societies, women are confined to the traditional roles of childbearing and housekeeping. In the world as it could be, women in all cultures would take their place beside men in positions of importance in government and industry, and in the arts and sciences. The reduced emphasis on childbearing would help to slow the population explosion.
- In the world as it is, pollutants are dumped into our rivers, oceans and atmosphere. Some progress has been made in controlling pollution, but far from enough. In the world as it could be, a stabilized and perhaps reduced population would put less pressure on the environment. Strict international laws would prohibit the dumping of pollutants into our common rivers, oceans and atmosphere. The production of greenhouse gasses would also be limited by international laws.
- In the world as it is, there are no enforceable laws to prevent threatened species from being hunted to extinction. Many indigenous human cultures are also threatened. In the world as it could be, an enforceable system of international laws would protect threatened species. Indigenous human cultures would also be protected.

- In the world as it is, large areas of tropical rain forest are being destroyed by excessive timber cutting. The cleared land is generally unsuitable for farming. In the world as it could be, it would be recognized that the conversion of carbon dioxide into oxygen by tropical forests is necessary for the earth's climatic stability. Tropical forests would also be highly valued because of their enormous diversity of plant and animal life, and large remaining areas of forest would be protected.
- In the world as it is, terrorists often feel that they can expect protection and help from countries sympathetic with their views. In the world as it could be, a universal convention against terrorism and hijacking would give terrorists no place to hide.
- In the world as it is, opium poppies and other drug-producing plants are grown with little official hindrance in certain parts of Asia, the Middle East, and Latin America. Hard drugs refined from these plants are imported illegally into the developed countries, where they become a major source of high crime rates and human tragedy. In the world as it could be, all nations would work together in a coordinated worldwide program to prevent the growing, refinement, and distribution of harmful drugs.
- In the world as it is, modern communications media, such as television, films and newspapers, have an enormous influence on public opinion. However, this influence is only rarely used to build up international understanding and mutual respect. In the world as it could be, mass communications media would be more fully used to bridge human differences. Emphasis would be shifted from the sensational portrayal of conflicts to programs that widen our range of sympathy and understanding.
- In the world as it is, international understanding is blocked by language barriers. In the world as it could be, an international language would be selected, and every child would be taught it as a second language.
- In the world as it is, power and material goods are valued more highly than they deserve to be. 'Civilized' life often degenerates into a struggle of all against all for power and possessions. However, the industrial complex on which the production of goods depends cannot be made to run faster and faster, because we will soon encounter shortages of energy and raw materials. In the world as it could be, nonmaterial human qualities, such as kindness, politeness, and knowledge, and musical, artistic or literary ability would be valued more highly, and people would derive a larger part of their pleasure from conversation, and from the appreciation of unspoiled nature.
- In the world as it is, the institution of slavery existed for so many millennia that it seemed to be a permanent part of human society. Slavery has now been abolished in almost every part of the world. However war, an even greater evil than slavery,

still exists as an established human institution. In the world as it could be, we would take courage from the abolition of slavery, and we would turn with energy and resolution to the great task of abolishing war.

- In the world as it is, people feel anxious about the future, but unable to influence it. They feel that as individuals they have no influence on the large-scale course of events. In the world as it could be, ordinary citizens would realize that collectively they can shape the future. They would join hands and work together for a better world. They would give as much of themselves to peace as peace is worth.

As George Bernard Shaw once said, “Most people look at the world as it is and ask ‘Why?’. We should look at the world as it could be and ask, ‘Why not?’”

Of course the tough question is not “Why not?” but “How?” As Avery states:

Next comes the hard part: How do we go from here to there? That will be the subject of the remainder of this book.

Similarly, Dear, the subject of the remainder of these X-chapters will be to suggest ways that humans might get “from here to there.”

POLITICAL PROBLEMS CAUSED BY RELIGIONS

In these X-chapters, however, I don’t plan to try to suggest solutions to all the world’s problems – because I already have enough problems trying to complete my answer to a question from a certain troublesome four-year-old!

Thus, as I might have mentioned once or twice before, a certain skunk grandchild asked me why I didn’t believe in God. The part of my response that I want to emphasize in the remaining X-chapters (as a part of my response that “**Belief in god is bad science and even worse policy**”) is that belief in god has made it (and continues to make it) much more difficult to find intelligent solutions to the many real problems facing humanity.

By proposing to restrict myself (in the main) to problems caused by religions, I claim that I won’t be restricting myself very much. Thus, although it would be difficult to be precise, I’d guess that at least half of the world’s major problems are derived from religious ignorance. As examples:

- Think of the problems caused by overpopulation, in turn cause by dumb birth-control policies promoted by ignorant clerics (especially Catholics and Muslims);

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- Think of the animosity between different groups (including wars) promoted, especially, in Christianity and Islam;
- Think of the consequences of so many people (in Hinduism and in the Abrahamic religions) “thinking” that they have another life to live after they die, and therefore “thinking” that they needn’t worry about their short existence on Earth, including their raping the environment;
- Think of the treatment of women in those same religions;
- Think of the consequences of those same idiotic religions not educating their children to think critically; and so on, on and on.

As a single example in contrasts, your clerics tell you that adultery or homosexuality or masturbation or... are “**abominations before the Lord**” and, if practiced, will preclude your entering paradise when you’re dead; in contrast, scientists tell you that releasing CFCs into the atmosphere will deplete the stratospheric ozone layer, damaging all life on Earth.

In his 2007 book, *god is not great – How Religion Poisons Everything*, Christopher Hitchens summarized the situation well (p. 56):

Violent, irrational, intolerant, allied to racism and tribalism and bigotry, invested in ignorance and hostile to free inquiry, contemptuous of women and coercive toward children: organized religion ought to have a great deal on its conscience. There is one more charge to be added to the bill of indictment. With a necessary part of its collective mind, religion looks forward to the destruction of the world. By this I do not mean it “looks forward” in the purely eschatological sense of anticipating the end. I mean, rather, that it openly or covertly wishes that end to occur.

Such “end-time” idiocy is rampant in Christianity, Islam, and Mormonism. For example, Dear, you’ve been indoctrinated in Mormonism, which “the LDS Church” officially calls “The Church of Jesus Christ of Latter-Day Saints.” Have you stopped to think about what’s meant by “Latter Days”?! And actually, there may be some (unwitting) sense in the term “Latter Days”, since as I showed you in the previous chapter, humans face the not incidental problem that our species may be headed for extinction – possibly caused by our own stupidity!

To date, life has managed to evolve on this planet without much thought about the matter. Thus, Nature managed (by herself!) to turn a tiny molecule able to replicate itself (probably from material available in some organic

goo) into a bunch of older blobs that can, for example, sit in front of their computers and bang out books for younger blobs! In all of this evolution, the prime goal was never more than just to continue – to survive. Those blobs that didn't, didn't! And if we could be objective about the matter, maybe we can see ourselves as just one more of Nature's experiments: Nature has now completed experiments with some number of billions of species and found that some number of millions were successful survivors. She now seems to be testing the hypothesis: “A more intelligent species has a better chance of surviving.” Maybe.

Some Probability “Guesstimates”

Let me try to put a few numbers on related probabilities and associated time scales. For example, based on the global models that I outlined in X5 and my own “guesstimate” of their reliability, I expect that there's about a 50% chance that the world's economy will suffer an enormous collapse during this century (maybe in about 50 years) – but that humans will “crawl out on the other side of the collapse” (in another century or so), a little wiser (at least it can be hoped) and with perhaps one third-or-so of the current population. In the “large scale of things”, therefore, such a collapse will have been little more than a “blip” in humanity's record – but maybe it'll be a sufficiently stimulating blip so that the survivors will be smarter!

As for the probability that, during the next few centuries, humanity will become extinct (e.g., for any of the many reasons given in the paper by Bostrom that I quoted in X7), my “guesstimate” is that the chances are less than 10% – provided that humans “stay on their toes”! That is, I expect that there's better than a 90% chance that humanity will continue, albeit not without suffering some major setbacks. In contrast, recall Bostrom's estimate (without suggesting when extinction might occur):

My subjective opinion is that setting this probability lower than 25% would be misguided, and the best estimate may be considerably higher.

Otherwise (save for the occasional major economic collapse and assuming that humanity doesn't become extinct), I expect “the human system” will just slowly evolve, slowly gaining more knowledge, slowly solving our many problems, slowly becoming more intelligent. In particular, in the relatively short time-period of 10 to 100 generations (i.e., ~200 – 2,000 years!), I expect that this (cultural) evolution will lead to the purging of all

supernatural silliness, after which time the remaining small minorities of religious people will receive the psychiatric help they need.

I expect that the organized ignorance known as organized religion will disappear, because such has been the “trajectory” that humanity has been on during the past ~10,000 years. That is, most people have now “killed off” all gods but one – which reminds me of what Lemuel K. Washburn wrote in his 1911 book *Is The Bible Worth Reading and Other Essays* (copied here from Aiken’s collection of quotations):

Where are the sons of gods that loved the daughters of men?
Where are the nymphs, the goddesses of the winds and waters?
Where are the gnomes that lived inside the earth?
Where are the goblins that used to play tricks on mortals?
Where are the fairies that could blight or bless the human heart?
Where are the ghosts that haunted this globe?
Where are the witches that flew in and out of the homes of men?
Where is the devil that once roamed over the earth?
Where are they? Gone with the ignorance that believed in them.

As Stephen Roberts said to a theist:

When you understand why you dismiss all the other possible gods, you will understand why I dismiss yours.

If I were pushed to quantify my assessment, my “guesstimate” would be that there’s a ~80% probability that collective delusions about the existence of the one remaining god will just slowly disappear.

But I admit that, on the one hand, I may be too optimistic. Maybe “fundamentalists” such as this country’s “Christian Right” (or better “Christian Reich”, or better yet, “Christian Wrong”!) will be successful in their desire to establish a theocracy in this country and then will be able to extinguish the lights of knowledge throughout the world for another thousand-or-more years. Maybe the equally crazy Muslim fundamentalists (or “Islamists”) will win in their campaign of terror, forcing everyone to bow and scrape to their imagined Allah five times a day. Maybe the probability is as high as 10% that such fools will plunge the world into another “Dark Age”. But I doubt it.

That is, on the other hand and assuming that we don’t become extinct, I expect that there’s a ~90% probability that we’ll be able to boot the one

remaining god off this planet. I boosted my estimate (from ~80% to ~90%) that humanity will purge itself of all religions (assuming that humans don't become extinct), because my suggestion that (with ~80% probability) religion will just slowly be extinguished may be too pessimistic.

I suggest that my “guesstimate” may be too pessimistic, because with systems as complicated as this Human System, predictions are difficult – if not impossible. As I mentioned in an earlier chapter, the inability to predict outcomes for nonlinear systems is known as the “butterfly effect”, which (as you can find on the internet) was discovered and named by meteorologist Edward Lorenz: in his attempts to make long-range weather predictions, he found that no matter how small was the uncertainty in initial weather conditions (e.g., winds caused by a butterfly flapping its wings!), then as the computations were executed, the uncertainties grew so large that, after less than a week's simulation time, the model's predictions were useless; thus, the frequently repeated statement that a butterfly in Brazil (or a grasshopper in the Sahara) can cause a hurricane. Such extreme sensitivity to initial conditions is characteristic of all nonlinear systems, such as humanity.

Human Butterflies – and Grasshoppers!

Humanity is certainly subjected to a huge number of butterflies – and grasshoppers. For example, if we receive a message from any extraterrestrials (ETs) – or better, a visitor! – then I'd expect that, in very short order, all religions and all gods would just vanish in an extraterrestrial “Poof!” Less fanciful, if physicists can convincingly demonstrate how this universe was created (e.g., develop predictions and tests of speculations from “String Theory”), then once school children learn about the experimental results, I'd expect that religions would relatively quickly disappear in a few generations – provided that the information has worldwide distribution, e.g., courtesy the wonderful internet.

Who knows what butterfly or grasshopper might set off the hurricane that will demolish all the defunct science known as religion: maybe there'll be collaboration between a tremendous author, a brilliant director, and superb actors leading to a movie that would quickly move humanity toward sanity. In fact, it can be argued (and, actually, has been argued) that the reason why Europe is ahead of America in purging itself of all religions is because of an amazing butterfly: the wit of Voltaire (1694–1778). His wit penetrated all levels of European society. Carriage drivers would repeat his assessment:

* Go to other chapters *via*

The first priest was the first rogue who met the first fool.

Others would repeat his condemnation:

A cleric is one who feels himself called upon to live without working at the expense of the rascals who work to live.

For all I know, a competent comedian may soon appear (say a cross between a Voltaire and a Bill Cosby!) who can lead the world to laugh all gods out of existence! Now there's a happy thought. As H.L. Mencken wrote:

The liberation of the human mind has never been furthered by dunderheads [such as a certain grandfather!]; it has been furthered by gay fellows who heaved dead cats into sanctuaries and then went roistering down the highways of the world, proving to all men that doubt, after all, was safe – that the god in the sanctuary was finite in his power and hence a fraud. One horse-laugh is worth ten thousand syllogisms. It is not only more effective; it is also vastly more intelligent.

Yet, in spite of such optimism, happy thoughts, horse-laughs, and visions of stimulating butterflies, I'm sorry to suggest that the most likely course (with ~80% probability) is “the long haul” – and I admit that within this ~80%, there's a ~20% probability that the outcome will not be Humanism but some “ism” as idiotic as theism (such as imperialism, nazism, communism, or some-as-yet-unidentified “stupidism”).⁴

The Pace of Cultural Evolution

I should also emphasize that by “the long haul”, I'm referring to the relatively slow cultural evolution, not the much slower biological evolution. There is, of course, a huge amount of data supporting the conclusion that *biological evolution* is astoundingly slow. Biologically, modern humans are essentially the same as our ancestors who lived ~100,000 years ago – although we're probably fatter! Therefore, almost certainly, there won't be major biological changes in humans during the next 10 to 100 generations.

But humans constitute a species not just because of our bodies but also because of our minds – and compared with our biological evolution, our *cultural evolution* has been and continues to be amazingly rapid. Thus, ever since humans learned to use language, ever since we found ways to

⁴ Dear: capitalism is not one of these “sutpidism” because, as Thomas Sowell said: “Capitalism... is closer to being the opposite of an ‘ism,’ because it's simply the freedom of ordinary people to make whatever economic transactions they can mutually agree to.” Unrestrained capitalism (or corporatism), however, can lead and has led to monopolies and Nazism.

communicate with more than grunts and gestures, our cultural evolution (and, sometimes, our regression) has been largely under our control. We wouldn't be what we are without speaking, writing, and “googling”!

It was human intelligence that tamed fire, made clothing and shelters, farmed, made wheels, and so on – and it was human ignorance that created gods, slavery, racism, and so on. As the Buddha said, ~2,500 years ago:

With our thoughts we make the world.

The 20th Century American anthropologist Margaret Mead added:

Never doubt that a small group of thoughtful, committed [people] can change the world; indeed, it is the only thing that ever has.

Many examples could be given, but maybe the best examples are from modern science and the many fields in which it's applied (mechanics, medicine, meteorology,...).

Some Examples from Science & Technology

The goal of pure and applied scientists is to develop and apply knowledge to benefit humanity, by helping to solve our many problems more intelligently. And of course I grant critics that technology has helped humanity take some steps backward (e.g., yielding more pollution and new ways to kill people), but in the main, those steps were directed by non-scientists (e.g., industrialists and their engineers, medical doctors, and politicians). Further, think of all the benefits accrued from science: scientific progress during the past few centuries has been absolutely astounding, leading to benefits in communications, travel, comfort, health...). Thus, if you were to ask teenagers in Tel Aviv, Tehran, Tokyo, or Toledo to describe recent “progress”, I'd bet that the vast majority would mention various applications of science.

In fact, during the past few centuries (a duration too short to measure on a time scale used to measure biological evolution), the pace of cultural evolution in “Western” nations has been so rapid that keeping abreast with it (or even comprehending it) is sometimes quite difficult. For example, certain grandchildren have difficulty comprehending that when I was a kid, our family had no telephone, no TV, no car, and there was no United Nations, no space flight, no personal computers, and no internet. Maybe they'll be more understanding when their own grandchildren have difficulty

* Go to other chapters *via*

comprehending no constraints on consumption or on family size, no prohibition on depiction of violence or indoctrination of children in religious ignorance, no...

There is, moreover, an absolutely wonderful set of ethics associated with modern science and its applied fields. Thus, I can think of no better example in which “equal opportunity” is the norm, where race and gender are irrelevant, where honesty is paramount, where the search for truth is all consuming, where intelligence, creativity, and perseverance are prized – and believe it or not, where kindness is king.

In support of that last claim, I could tell you stories about some of my “heroes”: the kind Nobel-Prize winner from India, Chandrasekhar, who helped me; the kind Jewish American scientist who helped me correct one of the errors in my Ph.D. thesis (whose name I’ll skip); and many more men and women from throughout the world (in Canada, England, Russia, Sweden, Germany, France, Italy, Israel, Indonesia, and Japan) whose kindness and competence I fondly remember. And let me add that I did what I could, so other scientists (e.g., from Brazil, China, Iraq, and South Korea) might remember me similarly.

What glory it would be if all humanity behaved similarly: no national boundaries, no government, no hidden agendas, no prime goal other than to help solve humanity’s problems intelligently!

And yes, again I would agree with the critics that there have been and maybe even still are some “bad actors”: some scientists (pure and applied) who lie, cheat, steal and perpetuate fraud, and the prime goal of some is their own aggrandizement. But my experience was that such “bad actors” sum to a small minority.

In contrast, in religion and politics, such “bad actors” are commonly in the majority! As a terribly unfortunate result, religious and political ignorance and power mongering still rule both this country and the world. I’ll show you some specific examples in subsequent chapters, but in the remainder of this chapter, I want to comment on just the relatively slow cultural evolution that I expect will occur, ridding humanity of all gods.

The Pace of Purging Religious Nonsense

I expect that the pace of purging religious nonsense will be slow – painfully slow – not only because it’s so difficult to purge people of their childhood indoctrinations but also because the gap between the two sides (anti-theists vs. theists, or humanists vs. religious, or naturalists vs. supernaturalists, or “Brights” vs. “believers”) is so wide, so deep, so fundamental, so threatening, so dangerous, and so rancorous (in part because of the river of blood that has flown and continues to flow between the two) that it seems almost impossible ever to span the gap with a “peace bridge”. Thus,

- Anti-theists will continue to refuse to yield their intellects to the imaginary gods of the theists;
- Humanists will never desert humanity to serve the imaginary gods of the religious;
- Naturalists will never accept the data-less speculations of the supernaturalists;
- Brights will always continue to repudiate the ideas of the believers so long as their “faith” rests only on schizophrenics’ dreams and visions and tricks of conniving con-artist clerics;
- We’ll never abandon our hope to help humans have a better life here on Earth, while they’ll never abandon their fanciful opportunities for their own eternal life in an imagined paradise.

And if you didn’t already know on which side of the gap your grandfather stands, then the above should reveal it!

Another reason why I expect that ridding humanity of religious ignorance will be so slow is because: what con-artist clerics hawk is so much more appealing than what scientific humanists have to offer!

- Clerics offer to “light the way to truth”; we admit that we’re stumbling in the dark, learning by trial and error, and that in the real world, “truth” can be approached only asymptotically.
- Clerics don’t require their followers to think; we require that people think for themselves.
- Clerics provide “moral absolutes”; if we recognize any moral absolutes, perhaps the only one is that all of us should use our brains as best we can.
- Clerics give their followers a clear purpose; we suggest possible alternatives.

- Clerics promise eternal bliss; we promise perpetual struggle.

And to become religious, all a person need do is believe – whereas to become a Humanist is to be continuously confounded by doubt. As Bruce Calvert said:

Believing is easier than thinking; hence, so many more believers than thinkers.

And actually, there's more. To introduce it, let me say that the two most courageous people by whom I've had the good fortune to be influenced are my wife and our daughter. Both have been through what, in a better world, no one should have to go through, and yet, each met those problems, and overcame them, with amazing courage.

In contrast, cowards would have cringed to their gods; cowards would have escaped from their troubles by drifting into their religious dream worlds; cowards would have convinced themselves that their difficulties were part of some grand scheme in which they were “being tested”. But my wife and daughter courageously overcame their trials by facing reality and relying on themselves – as Zen masters do.

But I admit that the clerics deserve credit for concocting such a “cop out”! For those too frightened to face reality, it's obviously great to escape into make-believe. Yet, although I see the attraction of relying on such a crutch (convincing oneself that reality isn't real, whereas make-believe is!), I admire the courage of my wife and daughter who struggled forward on their own, without the help of the clerics' crutch. Sir John Buchan (1875-1940, Scottish author and Governor General of Canada) summarized it well:

An atheist is a [person] who has no invisible means of support.

In any event, in the remainder of these X-chapters, I'll try to show you at least a few ideas about how we might be able to get from where we are to more peace and prosperity throughout the world – without any invisible means of support. Stated differently, a central theme of most of the remaining X-chapters will be how to eXpedite purging humanity of its religious delusions.

And the essence of my message will simply be: more people need to “Get real!” For example, Dear, if you “think” that your health can be maintained if you don't get more exercise, then...!