

## Notes for Thinking Green: Ethics for a Small Planet

Most of my work for Thinking Green author Karel Rogers involved asking questions to help her clarify her themes and nail the organization of a complicated text. These notes show some of the many questions and comments I made to achieve those goals.

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It's always difficult to second-guess readers' knowledge, but my hunch is that these terms need a bit of definition:

entropy

eukaryotic

organelles

mitochondria

genera

frozen accident (this one turns up several times)

p. 12 system-wide (although you discuss nested systems later, this is left undefined at its first occurrence)

peak oil

oil (petroleum) feed stock

stable isotope carbon signature

emergent properties, emergent outcomes—*emergent property* is key to understanding chapter 7, but I couldn't locate a definition (with examples) for it.

cradle-to-cradle

renewable energy standard

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who, whom/that/which—"Who" generally refers to people; "that" would refer to the other 1.8 million organisms. I may have missed a few usages, but generally "animals who" has been changed to "animals that" or "animals which."

"Whose" is problematic, but doesn't figure much in your book.

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Humble, humbly—not a phrase with which most Americans are familiar, I'd venture, at least not as it applies to themselves.

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References to time: I've suggested deleting phrases such as "As I write this" or "this year" and substituting the year or the month and year of the occurrence. That will get around the problem of accurately stating when something happened for an event that occurred in 2008, is described in a book published in 2010, and read in 2011.

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*Mess* is used frequently as a catch-all noun. I've replaced a few of them, but your text would be strengthened if you specified what sort of mess you mean.

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Ethics vs. morality

These terms are sometimes used interchangeably in your book and often are in informal conversation as well, but more formally, morality refers to standards or principles of conduct (good and bad, right and wrong), while ethics refers to the study of such standards. So one could perform a moral action on the basis of an ethical decision, say. Many of your readers won't care, but both terms are used frequently, so you may want to decide if you wish to distinguish between them.

I recall your mentioning that one of the Center for Free Inquiry people made the outlandish claim that use of the term *moral* implied god, which suggests only that they have let the opposition define the terms of the argument.

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Soft science types may desire a closer distinction between your various uses of "civilization" and "culture." I also found myself frequently unsure if you meant American, global, or human culture/civilization/way of life.

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More commas, fewer dashes!

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Modifying adverbs do not take a hyphen, but adjectives do. Hence,  
*globally known company* but *well-known company*  
*technologically advanced solution* but *technology-driven solution*

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Paul Hawken or Hawkin

feed stock or feedstock

time-species-global or time, species, global

All of these little changes (and there are lots more) should be taken care of by your copyeditor. I've made a number of minor changes, but this is by no means a full-scale copy edit.

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Subheadings have been (sporadically) added to suggest ways of guiding your readers through your text and highlighting your main points. I'm a big fan of subheadings as visual cues for the reader, but you may not share my enthusiasm. :-D Creating subheadings has the added value of showing where the text's development is uneven: trouble coming up with a subheading for a 2-3 page section may indicate that you have lost your way.

Subheadings guide the reader and make the text more visually pleasing: along those lines you could also consider sidebars and diagrams to highlight/explain.

In the same way, it's useful to look at the "key chapter concepts" at the end of each chapter: if they don't follow a recognizably logical progression (assuming that they accurately reflect the chapter's content), then the chapter's organization and development may need work.

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Here and there I've also added transitional statements; usually these are at the beginning of the paragraph.

Here and there I've inserted paragraph breaks to shorten long paragraphs for today's tiny sound bite attention spans.

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I think your son is right: the "new millennium" tag would have been more fitting for a book published in the 1990s. Most instances of "this new millennium" have been deleted.

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I've suggested deleting most phrases of the "I think" or "It seems to me" variety to add authority to your text. "I think [statement]" is your opinion; "statement" by itself is fact.

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Some references to popular books and movies, e.g., *Road Warrior*, have been deleted because while they may illustrate a point, they don't *prove* your assertions.

References to fiction are generally in the present tense.

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I am troubled by what I would call name-calling: fanatic, slob, sucker, cheater, or derogatory terms such as wrong-headed, gullible, tree-hugger. I tripped over them every time, esp. when you

suggested I and my fellow readers are stupid to be suckers. Appeals to conscience (ch. 10) have less appeal with the sucker backdrop.

Money is a huge driver—right up there with religion and nationalism. Since we can't change people's profit motive (education and appeals to social conscience won't alter the behavior of slobs and cheaters), making environmentally beneficial change economically viable seems to be the only way to go (e.g., New Zealand fisheries reserves).

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I'm puzzled by your documentation decisions: Sue Grafton is always cited, but elsewhere you make assertions, e.g., the water in Kansas is undrinkable, without backing them up. Overall, for a trade book, there seem to be a lot of footnotes (>100). Perhaps some of them, such as the ones for movies or fiction, could be placed in chapter endnotes at the back of the book?

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Turfgrass as unethical and just not very smart is a recurring theme. Have we really planted so much of it that it's a problem, or is it a problem combined with spreading parking lots and (worldwide, not just in the States) shrinking forests? Or, with all of this, is it creating a problem in deserts where it would never grow on its own? You really seem to have it in for grass!

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As you can see, Chapter 1 has been massively reorganized. The major change involved removing the introduction to/descriptions of the four major sections of the book from the middle of chapter 1 to "An Invitation" (very short) and "How This Book Is Organized" (longer, but the descriptions of the four book sections have been shortened). I'm trying to sneak around calling anything "Introduction," which for some people reads "Skip This Part." I'm not certain that "How This Book Is Organized" really gets around that problem, however.

Chapter 1 then begins by describing time/species/global, which rightfully takes first place because it is the major underpinning of your book. This does, of course, necessitate moving your opening story about Alex.

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p. 9 What is "our way of life"? Human life? Life revolving around internal combustion engines? Elsewhere this type of phrase is clearly defined (e.g., p. 10 "long-term sustainability of humans as a biological species in addition to our individual welfare and responsibilities"), but when left alone readers are invited to fill in their own meaning rather than be guided by yours.

Similarly, on p. 12, “these problems will kill our civilization and most of us.” The part about killing us is certainly clear, but overall your book suggests that killing off at least parts of our civilization—that is, how we live destructively—may not be a bad idea.

That is, there is a mild confusion between various references to *our way of life* and *our civilization* as being something we want to keep vs. something we want to change. Again, in ch. 4, what does it mean, exactly—or even roughly—that our civilization will collapse?

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Throughout chapter 2 I kept thinking you would hammer on Christmas (at least a little bit) as the epitome of American consumerism. Even before the recent economic turndown there were annual articles discussing Christmas spending and how well retailers were doing, etc., and god knows people feel obligated to buy stuff at Christmas so they don’t look stingy and, well, un-Christmasy. In fact, I added a sentence on this subject for you! You mention baby and bridal showers (and babies and brides are good business), but they don’t have the frenzied nature of Christmas advertising. We are clobbered with hurry up and buy messages by retailers who have piles of Christmas “goods” in the stores by Halloween and Valentines in the stores vying with Christmas close-out sales.

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p. 16 Ben Carson story

The mother’s insight and accomplishments surely match her famous and successful son’s. She clearly understood the types of connections you want people to make.

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p. 20 “Since WWII, U.S. culture has evolved into a global oddity, a culture of obligate consumers whose members have developed levels of conspicuous consumption that is essentially a peacock’s tail among human cultures.”

You come down hard on Americans and the American way of life, but what about Europeans? What about other middle to upper class people everywhere, e.g., the Israelis? There may not be many of them (i.e., as a small country Israel may not stomp a huge carbon footprint), but they enjoy a lifestyle—except for Hamas bombings—that can readily inspire emulation. It’s true that Americans have exported their excesses, but also true that other countries generally welcome them with open arms whilst simultaneously condemning those excesses.

Similarly, on p. 28 you comment on the silliness of 18th century wigs, but their wearers demonstrate that these Europeans were peacock tail–like consumers without the aid of Madison

Avenue or the American economic system. Today's profligate consumption in Dubai also suggests that rather than creating a monster, American marketing helped to unleash it. Elsewhere you comment (not in these exact words) that the American cultural/economic machine panders to humanity's baser desires to accumulate "goods." It seems that the export of *how* we do things—such as introducing monocropping in India rather than preserving the ancient practices of biodiversity in multiple plantings in a single field—is far worse than encouraging other countries to become consumption machines. These are inextricably related, of course. For one thing, as you point out, the world can't support a few more billion people living the American dream.

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I'd thought of asking you to consider stripping as many references to god as possible and simply leave that pseudo-question hanging, but as the preponderance of your readers will be theists—76% Christian in 2008, according to the Program on Public Values at Trinity College in Hartford—that suggestion ultimately doesn't make sense. However, I am still concerned by the seeming confusion between religion (which in your book is almost always Christianity) and spirituality and between religion and morality.

pp. 13-14 “. . . an expansive worldview . . . leads to . . . definitions of God that aren't limited by man's image or man's limitations. . . . As our worldview expands, *our spiritual goal expands from "getting to heaven" to include a recognition of our participation as active agents in the story of health and abundance that is the natural order of earth.* [same paragraph cont.]

*Connecting deeply to this place leads us ultimately to a much richer spiritual life in the context of our existing religions . . . .”*

My predictable question: why must one exist in the context of an existing religion in order to have a spiritual life? Why is it assumed that everyone's spiritual goal is getting to heaven? And again, in the aqua/yellow section of chapter 3 (p. 35), where you introduce Haught's scheme for relating our spiritual to our scientific selves, I repeat the question: how is religiosity the same as spirituality? And how does religion lay claim to morality? But I will readily admit that such questions will probably bother the preponderance of your readers not a whit.

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p. 14 “This shift in perspective means we don't have to keep second guessing God or limiting God to small pieces of this magnificent creation such as what occurs when we say God

intervened in this system with ‘intelligent design’ or when we say God created humans by fiat with methods different from the rest of the universe.”

The ID diehards probably won’t finish your book—if they don’t like the idea of our being related to chimpanzees, they surely won’t go for a common ancestor for people and mice—but in case they’re still reading, I think they’ll object to the quotation marks, which in this case tend to trivialize the phrase with them. More importantly, they won’t understand your claim that they are limiting god to small pieces of creation.

I don’t think you have a prayer (sorry) of persuading IDers to buy into evolution, no matter how much you appeal to the “god is great and magnificently creative,” “elegant, sophisticated system” perspective. It is a stance, as so many of our stances are, fueled more by emotion than by reason.

Do you want to even bother giving a nod to the atheists’ argument that evolution necessarily deletes god from the equation because, as an unending regression, there is no first mover? (I think that’s their argument—I think of it as the atheists’ answer to irreducible complexity.)

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p. 14 . . . a deep feeling of connection to what many call “Mother Earth.”

Okay, I’m in overdrive, but it’s possible that the hardcore Christians whom we hope will read your book may object to including so pagan a reference to mother earth in an otherwise god-oriented paragraph.

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p. 22 “If we succumb to the advertising signals around us and overeat . . .”

Obesity is one of the nested phenomena you describe: it surely is attributable to more than advertising. It is also related to land use decisions (more riding, less walking), god-awful food, and for children, no recess, being driven to school, and more video and less play. Schools today have vending machines with crap in them, and high school stadiums are sponsored by food-related advertising. Television certainly plays a role in foisting off “food” in advertising aimed at children. Literature tells us of fat people long before there was advertising, or even enough for people to eat. Although you urge us to consider answers from nature, I get no help in the form of my two cats, aka Lives to Eat and Eats to Live. They do not watch TV ads. Tubby would be dead by now if I did not ration her intake. Other animals, like horses, are known to eat until they are sick. Perhaps obesity (human, that is) could be developed as an example of nested, intersecting influences?

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p. 32 “a pair of green iguanas” Most of us don’t want iguanas and/or aren’t biology profs with some legitimate reason for having lizards, but their presence suggests a stamp of approval for exotic pets in ways that Little Chicken does not.

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pp. 36-37 Paragraph beginning “Confirmation starts with the premise that truth is absolute . . . we must be careful to avoid using only experiments and data or only theology and holy book interpretations to determine where the truth lies.” Oh, gosh, Karel, members of both camps will flay you alive, and they’ll have self-righteous fun doing so.

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pp. 39-40 I feel like an idiot, but I get lost shortly after “Genes are made of long molecules of DNA that code for the sequence of amino acids that are hooked together side-to-side into proteins.” I try to visualize “hooked together side-to-side” and come up with nothing. By the time you hit “triplets” I’ve given up. You may recall that my dissertation was on Shakespeare, so there may be reasons (for which I am not responsible!) for my blank idiocy. The quality of American science education is frequently damned, so (small comfort) I may not be alone. You want to keep as many readers with you as possible, of course; if I were reading your book I wouldn’t quit reading, but I’d skip this part.

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p. 39 “. . . mutations occur with associated probabilities that are, in a broad sense, predictable. This means observed deviations from the predictable occurrence of mutations . . . .”  
How much statistics will readers have to know to understand this?

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p. 45 “Old beliefs that humans are above and separate from nature won’t protect us from our actions. Evolution impacts all of us regardless of whether we believe it is working or not.”  
These are two separate arguments, and only the first holds water. The second is the same old tautological argument from the believer (of something) to the nonbeliever: *You don’t believe in god/evolution/gravity, but nonetheless you are affected by god/evolution/gravity whether you know/admit it or not.* Tautological, that is, in the sense of being unfalsifiable. In contrast, the first statement about old beliefs can apply equally to anyone of any form of belief who thinks that humans are separate from the natural world.

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p. 49 “life support systems on earth”

What a great phrase! Everyone has heard about life support systems in hospitals, submarines, and space ships: this takes that concept—if the O2 or potable water is interrupted for too long, you’re dead—and makes it apply to everyone across the globe.

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p. 59 ~~“Repeatedly I’ve observed people in America talk about things like health care for all children, family values, improving the educational system for poor and minority people, and other moral goals. But decisions almost uniformly come down to economic decisions rather than moral decisions.~~ When we drive our decisions by economic concerns, humans and the environment pretty consistently lose. The next chapter focuses on food and water, [issues unarguably crucial to human health and welfare](#), and how the I, me, now perspective coupled with apparently cheap choices have cost us more than we can possibly afford.”

This paragraph is the transition between chapters 4 and 5. The suggested deletion is not clearly connected to ch. 5 and opens a can of worms: how would you separate money and morality when discussing health care and education? The types of decisions you mention surely have both moral and economic implications.

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p. 63 You mention CAFOs without going into their degradation of the water supply and the animals trapped in them. Is that something that could be developed? As a reader, I’m sometimes not sure of whether you refer to industrialized farming/agriculture or farms that are still owned and run by families. Perhaps you could mention the growing size of agribiz operations and the loss of family farms?

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p. 72 “The Ten Commandments did what was important at the time—define the human-divine relationship and the rules of human-human relationships. These rules have gone a long way toward the present human success as a species . . . .”

This sentence shows a strong Christian bias, which is fine if you intended it, but less desirable if you did not. Plenty of people, races, and cultures advanced without the ten commandments of the Judeo-Christian religion, and I wouldn’t be the first to point out that people who never heard of the TCs knew that murdering and stealing weren’t desirable behaviors. TCs also don’t mention things like wars of aggression and rape.

p. 72 “the lack of human-environment rules has left us with a major hole in our moral behavior”

But human-environment rules are ultimately human-human rules, esp. after humans have passed the infancy of their relationship with the earth and see, as we see today (or should), the costs to humans of environmental damage. *Thou shalt not covet* probably could be applied to things like other people's water supplies, too.

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p. 75 “Bill Moyer’s television special also had great information about water. I love this story because of the ‘tree-hugger’ stereotype of environmentalists.”

But isn't what you describe here a business decision as well as, if not more than, an environmental decision? (Nonnative) trees and water were both valued, and water clearly won. The authorities who are paying to have these trees removed aren't environmentalists, they're business people with a problem (not enough water) that they need to solve.

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p. 75 “According to my brother Dayle, who is a civil engineer . . .”

I'm not sure what to make of usages like this: they add to your personal and conversational “voice,” but they detract from your book's authority because Dayle (in this case) lacks any particular clout. Using your engineer children for suggestions about how to deal with Plug, in contrast, makes sense because the hedgehog was a personal, contained problem.

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pp. 80 ff. The Rapa Nui story continues to amaze me as a stunning, complete, naturally occurring metaphor for your entire message. It is a case study for McDonough's reverse design assignment for his architecture students for which they were to design a disaster, only without fossil fuels. It seems we can reconstruct the attitudes and see them at work in the earlier deforestation of North America and countries like Brazil today. I'm a tree-hugger, myself—I love trees. We need more tree-huggers, in fact: witness the E.U./U.S. hesitation to include forests in carbon sequestration efforts.

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p. 83 “For each commons, there is a dilemma because, as Hardin points out, you cannot appeal to the **conscience** of people to take care of the problem. . . . educating people will not solve the problems . . . because some people have no **conscience**, which is the key factor that must be activated to instill a sense of fair play.”

Is this conscience or *social* conscience? This seems related to the need to expand the “circle of concern” (p. 11). People with a conscience, but not a social conscience, may pollute the water table but they wouldn’t dream of stealing from their next-door neighbor, for example.

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p. 96 “an expensive oriental-style house on the Pacific Coast. This house is elegant in the extreme. It has an entryway with an arched bridge over a large Koi pond with a rock island in the middle,” and so on.

Is the koi vs. cat story worth giving a free pass to this example of conspicuous consumption?

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p. 103 “Cultural evolution is different from biological evolution because cultural evolution is Lamarckian rather than Darwinian. This is just a shorthand way of saying that cultural information can spread by learning to genetically unrelated individuals—essentially inheritance of acquired characteristics.” [etc.]

This sounds similar to one of your favorite authors, Richard Dawkins, and his discussion of memes in *The Selfish Gene* (although his memetic theory may have fallen out of favor with social scientists, however).

It would be helpful, when you first introduce Lamarckian evolution, to explain who Lamarck was, his theory, and (briefly) how his theory fell upon hard times among scientists. His name is much less familiar than Darwin’s. Examples of cultural shifts spawned by individuals (more-or-less ordinary individuals) would bolster the contention that individuals can make a difference. This is esp. important as in places individuals trying to make a difference are called suckers.

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Ch. 8 opening—The deer roping story is awfully long to make your point that we need to choose goals wisely (and not ignore how nature works while doing so). More importantly, it’s the only long story that isn’t about you, and therefore doesn’t add to the “we’re getting to know Karel, she’s an engaging person with lots of interesting experiences” tone of your book. Could you dredge up a story about yourself in which your goals and nature were out of sync?

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p. 119 The general argument about the poor historically being unable to access national parks seems weak: poor people have always had trouble enjoying things that take money, but that doesn’t mean we shut down museums, theaters, foreign travel, etc., because poor people can’t buy a ticket.

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pp. 130 ff. “There’s one last piece we should talk about before closing this chapter. . . . In my mind, the saddest victims of The American Dream are our children and our senior citizens. . . .”  
p. 132 “Land use and our ability to form viable communities are inextricably intertwined.”

The points in this concluding section may all be true and sad, but they are not clearly related to land use, the topic of the chapter. We could be model citizens in land use and still segregate the elderly and the children. Even the words you use to introduce the “saddest victims” suggest that this section is tacked on at the end and not integral to your argument.

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pp. 131-132 “As a result of our unique history, Americans have developed goals and assumptions about our relationship to the land that are no longer tenable. One is that of preservation of wild places, our national parks—areas sanitized of Native Americans and carnivores and off limits to anything but recreational activities.” [and similar statements earlier in ch. 8]

You clearly object to the National Park system, but it’s not clear what you are propose instead. The juxtaposition of NAs and carnivores suggests they are of equal value (an implication to which NAs may object). What do you suggest? I’m not sure we could find many NAs willing to live in National Parks under 18<sup>th</sup> century conditions. You may want to develop this issue a bit because, as you point out, Americans largely accept without much thought the value of preserving nature. I suspect some of your readers may be baffled by your rejection of the idea of the value of preserving wildness.

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Choosing where and how you live

As you say, people’s jobs change and their children change schools as they get older. Are you suggesting that people should move if these changes necessitate travelling increasing distances? This brief paragraph doesn’t seem to acknowledge the difficulties two-career couples face, nor the desire of some people to live close to other family members, nor the fact that some of us are lucky to get any job. We may not like the commute, but we can’t simply sell a house and move our families. Many of your suggestions seem keyed to young people who haven’t yet made some of these major decisions, such as where to work and live. Your inarguable point is that we should be purposeful, but things happen. I didn’t choose the Infiniti SUV I drive; I inherited it in my divorce. It sucks gasoline. Sell it for a smaller car? No way: it’s paid for, and it’s a 1999, which

means I haven't supported the automotive industry with a new purchase for a decade. My suggestion is that you may wish to speak to readers who are currently living with past decisions.

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p. 143 “. . . at some level Al Qaeda is the desperate fight of a small group of extremists who have redefined the rules of war so they can fight to protect their way of life from Western incursions of economic and military might.”

No matter how mild and rational you may find this statement, my hunch is that it would not go down well with your largely Christian, pro-American audience.

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p. 163 “For your vacation and for short business trips, avoid plane travel because it is one of the most energy-intensive modes of travel. Instead, try a train or an energy-efficient vehicle. You might also want to explore the vacation opportunities close to your home . . .”

But the U.S. is a huge country, and we're spread all over the place—my daughter's dad is in Texas, for example, and my only sibling is in Seattle, and on the rare occasions when I get to see her, of course I'll fly. I'd do it more often if I could.

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Growing food—I don't think you mention community gardens, which are great for apartment dwellers or people who can't farm their yards. I know about this program in Seattle (<http://www.seattle.gov/Neighborhoods/ppatch/>), but there must be others.

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p. 164 “Freedom comes from sizing our work lives, our home lives, and our consumption to our needs rather than to a fickle, never-decreasing well of wants.”

You mention health care as the fly in the ointment, and it certainly can be a huge problem when trying to establish one's freedom. Health care is both a need and a want and is one of the drivers of our personal and national economic choices, as you point out. How can we educate ourselves away from the belief that we need and deserve all those MRIs and blood tests and diagnostic X-rays and colonoscopies, etc?

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p. 173 The ideas in the long bulleted quotation from the Rocky Mountain Institute are so vital, so central to your argument that it seems it should come earlier in your book. Maybe it could go toward the beginning, with the promise to readers that you will refer back to the ideas as you go along? If not that, it may deserve a bit more explication than you offer, as it's a long quotation

without much commentary from you. (You do develop some of the ideas in ensuing paragraphs, e.g., Interface carpet manufacturing.)

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p. 178 “now one snow storm can knock out electricity to several million people at one time” This is a great example of “monocropping” energy and how the subsidization of the power companies is bad business in more ways than one: loss of power means loss of business and productivity and if the weather is extreme, loss of life as well. Loss of business translates into loss of money, which is something business people should understand.

Similarly, after *Silent Spring* we have regular Earth Days and don’t dump DDT anymore, but how many changes, e.g., increased fuel economy, decreased emissions, etc., have been market driven rather than conscience driven?

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p. 179 “Clean coal” is being hyped on TV (with footage from Obama’s campaign), and readers may want to know more specifically why you are against it and why it will never come to pass. You dismiss it as being “experimental” (as opposed to impossible), yet elsewhere you laud energy innovators.

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p. 180 cap-and-trade

Do you want to mention the huge and vociferous stink against cap-and-trade, i.e., the claims that it will be the death knell of American industry and manufacturing? Readers will have heard of cap-and-trade but may not (probably don’t) completely understand it. Maybe an example of a country/countries where it is in use?

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There are many Michigan examples. Even if MI is a hotbed of environmental responsibility and TBL activism, the book still seems more local than national. If I’m reading in Connecticut or Oregon or Illinois, I want some assurance that you’ve taken a nationwide look at the problems you discuss. More international examples would be good, too, such as the CIBA-Geigy toxin-free fabric story.

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Your TBL seems to be ethics, environment, economy. E<sup>3</sup>=Life

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If local changes by local people will improve conditions not only in that time and place, but will gradually gain momentum and spread to other parts of the country (say, if the West Michigan Sustainable Business Forum could be replicated in other cities), do you see the United States as leading the charge given that the rest of the world is unlikely to believe the U.S. much in terms of sustainable business tactics? Or is your point that it is precisely the size of the U.S. that makes it ideal for encouraging TBL change abroad?

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### **Section I Gaining Perspective**

See what you think of my suggested revisions: this section should clearly set out the issues of the book, why the reader should care, and promise to help the reader find a solution to some of the problems discussed. Once you start talking about worldview expansion and moral pivot points I think you will lose some of your readers, but that's okay: you only need 20%. In fact, you could introduce the 20% idea at the outset and invite the reader to be part of it.

You can't keep rewriting your text to reflect every new news article, but the popular press is claiming a change in our consumption patterns—stories about pinching pennies, buying in bulk, and “frugality is the new cool” are appearing regularly. People are not buying with their once-gleeful abandon. Do you want to mention these nascent changes? The recession will last for some years, so changes in consumption patterns may be more than a temporary blip.

### **Section II Wrong-Headed Misconceptions**

The discussion of evolution and the idea that we have scientific and spiritual parts to ourselves is a bit problematic because you are preaching to the choir. It's unlikely that you would come up with anything (and I don't think you have in this book) to dissuade me if I rejected the idea of evolution or really didn't want to think that I have much in common with mice and chimps. Also, I can reject all that yet still not be a doomsday Christian, happy that the disintegrating earth signals the coming of the end times. IDers who accept the idea of god's stepping in because some parts of creation show irreducible complexity that they claim cannot be accounted for by evolution don't necessarily reject *all* evolution, so they may see the value of things like biodiversity.

Changing our ideas requires a monumental shift, and the ideas you want to change in your readers don't really concern their acceptance of scientific theory so much as changes in their

ideas of how they and their society should do things. (That said, I could really do with a diagram of the energy-flipping triplets, etc., to help along my feeble understanding.)

I never quite figured out how the major points in chapter 4 fit together. The chapter introduction mentions that ethical decisions don't necessarily entail "preservationist constraints," yet your comments on the National Park system come much later. This chapter argues that other species modify their environments, moves to Madagascar (we're to modify their environment?), and introduces Hawken's three principles of nature (plus your fourth), but the connections are not always clear.

Chapter 5, in contrast, on food and water, is far more cohesive. The intersecting issues of corn, meat, water, and global warming are clear enough for the general reader to follow. This chapter also includes examples of individuals (Bazzani, Melander) who are making a difference.

### **Section III How This Place Works – An Informed Time, Species, Global Perspective**

This is a tough section because it is difficult for the reader see how the four chapters are related to each other. Neither the introduction at the end of chapter 5 nor the wrap-up at the end of chapter 9 spells out the relations among the four issues; we readers are told only that we need to understand them in order to cultivate our time, species, global perspective. Individually, chapters 6 (commons), 8 (land use), and 9 (war) have coherently developed topics.

Chapter 7, however, began to give me fits. I simply couldn't get it to fit together. Studying your development and organization reveal some of your plan for the chapter, but most readers won't go that far, nor should they have to. The chapter is on track for most of its first half, but wanders in the second. Part of the problem lies in the subject, which is abstract compared to corn, water, war, and global warming. The introduction to the chapter (end of chapter 6) calls for "an understanding of the levels of organization that exist in visible matter in and around us. These levels of organization are continuous, depend on one another, interact with one another, and each level has emergent properties that cannot be fully explained by the next lower level."

There are no concrete ideas in that quotation, and without an understanding of "emergent properties," which is not defined but which is used frequently in chapter 7, the reader begins at sea. Chapter 7 introduces ideas and words like paradigms, reductionism, levels of organization, nested continuum, emergent property, emergent outcomes, frozen accidents, cultural evolution, complex adaptive system, context of nested complex adaptive systems, Lamarckian evolution,

and GPI. Interspersed we have Angelina Jolie, Denzel Washington, television, and health care—you do use specific examples, but sometimes they are not enough to illuminate the nested levels. By the end of the chapter I wasn't quite sure why we were talking about TV and health care.

The chapter goes astray, which is shown in how the conclusion to chapter 7 doesn't clearly reflect its introduction:

Introduction (end of ch. 6): “. . . an understanding of the levels of organization that exist in visible matter in and around us. These levels of organization are continuous, depend on one another, interact with one another, and each level has emergent properties that cannot be fully explained by the next lower level.”

Concluding statement: “The problems discussed in this chapter—what people want acting as a driver for public policy, which in turn acts as a major selective force on key complex adaptive systems like our culture and economy—lead us to look more closely . . . [at ch. 8]”

This one needs a little work to bring it into focus.

#### **Section IV Freedom and Prosperity**

Overall, *Thinking Green* is clearly not a how-to book. Readers will want to know what they can do, so the information and suggestions in chapter 10 about choosing housing and transportation are necessary. As a reader, I would be also be interested in how, as an ordinary individual, I could participate in culture-changing Lamarckian change (in addition to green housing and practicing energy efficiency and thinking and acting purposefully). How do we get Lamarckian cultural shifts to confront the slobs and cheaters?

Chapters 10–12 are coherent and readable and help to dampen some of the book's earlier gloom and doom. However, I was a little unclear why you expand on the idea of punctuated equilibrium in chapter 11, as most of your discussion focuses on cultural, not biological, evolution.