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A CODE OF ETHICS FOR OFF-EARTH COMMERCE

Dr. David M. Livingston
Livingston Business Solutions
P.O. Box 95
Tiburon, California 94920
E-mail: dlivings@davidlivingston.com

Abstract

Now is the time to put forth an effective code of ethics for businesses in outer space. A successful code would be voluntary and would actually promote the growth of individual companies, not hinder their efforts to provide products and services. A properly designed code of ethics would ensure the development of space commerce unfettered by government-created barriers. Indeed, if the commercial space industry does not develop its own professional code of ethics, government-imposed regulations would probably be instituted. Should this occur, there is a risk that the development of off-Earth commerce would become more restricted. The code presented in this paper seeks to avoid the imposition of new barriers to space commerce as well as make new commercial space ventures easier to develop.

The proposed code consists of a preamble, which underscores basic values, followed by a number of specific principles. For the most part, these principles set forth broad commitments to fairness and integrity with respect to employees, consumers, business transactions, political contributions, natural resources, off-Earth development, designated environmental

protection zones, as well as relevant national and international laws.

As acceptance of this code of ethics grows within the industry, general modifications will be necessary to accommodate the different types of businesses entering space commerce. This uniform applicability will help to assure that the code will not be perceived as foreign in nature, potentially restrictive, or threatening. Companies adopting this code of ethics will find less resistance to their space development plans, not only in the United States but also from nonspacefaring nations. Commercial space companies accepting and refining this code would demonstrate industry leadership and an understanding that will serve future generations living, working, and playing in space.

Implementation of the code would also provide an off-Earth precedent for a modified free-market economy. With the code as a backdrop, a colonial or Wild West mentality would become less likely. Off-Earth resources would not be as susceptible to plunder and certain areas could be designated as environmental reserves for the benefit of all. Companies would find it advantageous to balance the goal of wealth maximization with ethical principles if such

a strategy enhances the long-term prospects for success.

Introduction

Off-Earth economic expansion will come into existence faster, with far more acceptance and with more profit potential, when ethical models are put in place. Our national economy boasts numerous companies that have prospered in large part because of their adherence to an ethical code—Nordstrom, Ben and Jerry’s Ice Cream, Whole Foods Markets, and The Men’s Wearhouse, to name just a few. What’s more, there is a growing segment of investors who prefer to invest in ethical companies with good prospects. Companies in this niche, aware of the increasing demand for ethical business operations, use marketing campaigns to specifically target this segment of socially responsible investors.

The idea of adopting an ethical approach to business is no longer unique. In fact, the concept is well established in college marketing classes. One textbook points out that in the past few years the number of large companies appointing ethics officers has grown from zero to about 25% and that about 60% of companies surveyed had a code of ethics.¹ The authors of this text cited the following advantages for using ethical guidelines in corporate business:

It helps employees identify what their firm recognizes as acceptable business practices. A code of ethics can be an effective internal control on behavior which is more desirable than external controls like government

regulation. A written code helps employees avoid confusion when determining whether their decisions are ethical. The process of formulating the code of ethics facilitates discussion among employees about what is right and wrong, and ultimately creates better decisions.²

One of the most important contributions we can make in this coming era of space industrialization is the establishment of ethical principles for industries conducting business off-Earth. The practices and values we take with us into this new frontier will set a precedent for a new economy, as well as for the daily lives of individuals choosing to live off-Earth.

What Is a Code of Ethics?

Professor William Birkett from the University of New South Wales in Sydney, Australia, divides corporate codes into three types. The first type is the *code of ethics*, which is, in his words, “a statement of the values and principles that define the purpose of an organization.”³ The second type, a *code of practice*, guides and directs decision making, whereas the third type, a *code of conduct or behavior*, prescribes or proscribes certain behavior.⁴ The first type, the code of ethics, is the subject of this paper.

A code of ethics can simply be suggested guidelines that are quite similar to a code of practice. Alternatively, the code of ethics may be rather stringent, mandating that all company employees adhere to strict rules of behavior. Depending on how and why the code is designed, the code of ethics may become a vehicle “for reconstituting the power of

community ethics and morality as corporate power.”⁵ Thus, a code of ethics can be a managerial device to establish a level of corporate morality. As such, it may include certain policies deemed necessary by the company. A well-designed corporate code of ethics, especially one that is applicable to a new industry such as space commerce, can help to meet unusual developments in an evolving business environment.

It is important to understand that in a perfect world, ethics should involve choice. Ethics, without the freedom to choose, is nothing less than law. Most codes of ethics are voluntary statements detailing how organizations will conduct business and how associated individuals will behave in their performance of business activities. As such, a code of ethics describes in detail some of the more obvious and important ethical values to which a business should adhere. Creating a code of ethics helps a company and its employees to determine their ethical values and codify them within a set of established guidelines for their business behavior.

A well-written code of ethics would facilitate, rather than hinder, the growth of individual businesses. Furthermore, a properly designed code of ethics would ensure the development of space commerce unfettered by government-created barriers. Indeed, if the commercial space industry does not develop its own effective professional code of ethics, then government-imposed regulations will certainly fill the void. Should this occur, future development would probably be far more difficult and costly.

To fashion an effective general code of ethics, input would be necessary from private parties engaging and advocating

commercial space ventures as well as from relevant public-sector policymakers. The extrapolation of a code of ethics from terrestrial business to off-Earth commerce would assure that the code would not be perceived as foreign in nature, potentially restrictive, or threatening to commercial development. Companies adopting a code of ethics may find less resistance to their space development plans, not only in the United States, but also from nonspacefaring nations. Less resistance helps companies commit more resources to implement business plans rather than address political or regulatory issues.

The Need for an Effective Code of Ethics

Numerous illustrations of unethical business practices here on Earth can instruct new space industries on what they should not do. One such example involves the tobacco industry. Over the past several decades this industry has targeted youth in its marketing efforts, covered up the harmful nature of its product, and formulated its product to be as addictive as possible. These practices have seriously jeopardized the current profitability of the tobacco industry as it has paid billions in penalties and fines resulting from private party and government litigation. The exorbitant legal claims against this industry would seem to demonstrate the true long-term costs of pursuing unethical policies in search of quick profits.

Another industry worth mentioning for its unethical practices is the healthcare industry, for health maintenance organizations (HMOs) have frequently placed profits ahead of the healthcare needs of the insured. This practice has resulted not only in extensive litigation costs for the HMOs, but restrictive legislation on both

the federal and state level. Both litigation and legislation is certainly raising the operating costs of the HMOs. While the HMOs will try to pass the increased costs on to their policy holders through rate increases and benefit reductions, it is likely that their overall profitability will be reduced from what it would have been had the HMOs simply been ethical from the beginning.

Other more recent examples of unethical practices can be found in specific companies such as Firestone, Ford, and Pacific Gas & Electric (PG&E). Firestone and Ford knew that faulty tire construction was causing injury and death in SUVs but did nothing until the matter became public. Later, because of the negative publicity, they were forced to recall the tires and compensate victims. This corporate behavior also cost both companies a significant amount of money in short-term sales and may have a long-term effect on their marketing images.

Pacific Gas & Electric Company (PG&E) also qualifies as a worst-case example for this discussion given the corporation's refusal to honor disability claims of more than two hundred workers.⁶ It was true that PG&E had filed for bankruptcy as had the company handling the disability claims for PG&E, but during the same period the corporation won approval from its bankruptcy judge to pay over \$17 million in bonuses to executives and key employees. Eventually, the disabled workers did receive their disability compensation in a settlement with the company.⁷ More recently, other companies, such as Arthur Anderson, Enron, Merrill Lynch, Global Crossing, and Worldcom have been accused of using questionable

accounting practices to misstate reported income.

It is fitting that we question unethical business practices and make a clear distinction between inappropriate business conduct and the type of corporate leadership we will want in off-Earth commerce. Since we as pioneers carry the responsibility for building an ethical foundation for the future citizens of space, shouldn't we demand the highest standards? Yes, we must because we have learned again and again that short-term thinking hurts both people and profits. In adopting a code of ethics, organizations demand more of themselves and publicly commit to advancing ethical practices throughout all aspects of their business.

The Role of the Code in a New Economic Model

As a new era of off-Earth commerce begins, business executives, advocates, and politicians will decide, either explicitly or implicitly, what type of economic model will prevail in off-Earth development. There are three likely choices, two of which have been tried before. The first pursues off-Earth development and settlements with the boom-or-bust mentality prevalent during the California gold rush in the middle of the nineteenth century. This approach often resulted in violent behavior and the wholesale destruction of natural resources. The second choice is to fashion off-Earth development after the imperialistic powers of previous centuries wherein wealth was created by using colonies, sweatshops, and political control. Imperialism historically led to revolution and social upheaval. If off-Earth boomtowns or colonies become realities, then an opposition may develop that will

insist on protective legislation from governments, possibly the UN, or some other organization created for this purpose. A proposed third model, however, calls for an entirely new vision, drawing upon the successes and failures of the past. This new model, based on a modified capitalist system, could guide us in using our experience and collective wisdom to develop off-Earth resources with twenty-first-century care and efficiency. This economic approach, supported by an effective code of ethics, would support commercial space development, and, if followed, would avoid the costly consequences that burden businesses when the other two models are employed.

Property rights, the basis of a free-market economy, must be available to those engaged in the off-Earth businesses. Yet private-property rights may exacerbate problems with developing nations because these countries have no means of competing for the rights. Therefore, in order to avoid costly controversies, it becomes increasingly important to apply ethical standards to the creation and implementation of property rights in space.

By adopting a code of ethics for conducting off-Earth commerce, companies will minimize many potential risks. This code of ethics would recognize the challenges facing commercial development and motivate participants to be more thoughtful about these issues. The code would also recognize the unique nature of space in relation to Earth, which, of course, has already been developed for thousands of years. Businesses must approach off-Earth development with caution, care, and concern. A well-designed code of ethics secures the commitment of employees and management alike to the spirit of the code.

But simply having a code is not sufficient. Most, if not all, of the companies cited earlier in this paper as having engaged in unethical practices had existing codes of ethics and behavior.

Awareness of potential problems resulting from casual development in space must be an initial priority to avoid the tremendous damage control we have had to implement here on Earth. The code could address these issues by ensuring that only those people offering the highest quality in business management and leadership would participate in building the foundation for the new space economy. With human nature's best qualities and characteristics represented in the management of new space businesses, we increase the likelihood of sustainable commercialization. Fritjof Capra, in *The Turning Point: Science, Society, and the Rising Culture*, clearly illustrates this point when he writes, "We live today in a globally interconnected world in which biological, psychological, social, and environmental phenomena are all interdependent."⁸ The more we acknowledge this interdependence, the greater will be our success as we move toward an expanded off-Earth economy.

Lunar Development and Benefit-Sharing

Development of the Moon is significantly closer to reality than that of Mars. As such, the development of the lunar surface and the sharing of lunar resources are issues of immediate ethical significance. Millions of people are familiar with the NASA pictures of the footprints left by the astronauts in the Sea of Tranquility on the Moon. NASA's caption under the photo reads: "Footprints left by the astronauts in the Sea of Tranquility are

more permanent than most solid structures on Earth. Barring a chance meteorite impact, these impressions in the lunar soil will probably last millions of years.”⁹ Most areas on the surface of the Moon will undergo change, regardless of the nature of the project. To many critics, however, this is unacceptable. Nonetheless, when advocates of lunar development talk about setting aside portions of the Moon for public parks, opponents are quick to point out that even those activities in “protected areas” will forever alter the virgin surface of the Moon. These issues need to be resolved or commercial development of the moon could be halted.

While some critics are focused exclusively on lunar development issues, others are concerned that all nations and all people might not have access to lunar or other space resources, a concept strengthened by the United Nations Moon Treaty. The Moon Treaty addresses the highly controversial concept of benefit sharing for these resources. Only a handful of nations have accepted the Moon Treaty. Both the United States and the former Soviet Union have rejected it. Notwithstanding, the Moon Treaty remains enforceable among those countries that approved it and possibly among all United Nations’ members. The Moon Treaty, with its “common heritage of man” terminology and its requirement for benefit sharing among all nations, has the potential to strike at the heart of off-Earth commerce. A code of ethics accepted and implemented by off-Earth development companies may not only help diffuse the fears and concerns surrounding these issues, but it may also facilitate careful and well-planned off-Earth development.

The March 2001 Space Law Conference in Singapore has provided a realistic indication of the future that awaits those seeking to commercially develop the Moon and other off-Earth resources. In his opening remarks, the Singapore Attorney General, Chan Sek Keong, said: “All nations have a common stake in the resources found within the province of space. However, only a small number are in a position to exploit them. Outer space, like the high seas and the continent of Antarctica, is a common heritage of mankind.”¹⁰ Because of this attitude among many nations, costly legal challenges to lunar and other off-Earth development projects may be on the horizon as the development of space resources gradually evolves.

There is an ongoing trend toward pitting developed nations against developing ones. Peter Capella provides a good example when he cites a report of the International Federation of Red Cross and Red Crescent Societies. The report predicts that poor countries will seek legal compensation from industrialized nations for hastening global warming and climate change. Further, the report recommends the establishment of an international tort climate court, claiming that “increasingly sophisticated analysis of climate change means that ignorance of the consequences of industrial consumption and pollution can be no defense for inaction.”¹¹ Although global warming is not usually associated with off-Earth development, the trend remains noteworthy. If off-Earth commerce is to proceed unfettered by governmental barriers such as regulatory requirements and direct legal challenges, then the commercial space industry should consider actions to minimize the risks of benefit sharing. Ignoring this issue, as well as the

larger issue of ethics, will likely result in future barriers that reduce the potential return on investment.

The concept of benefit sharing can be demonstrated when a private company drills for oil or gas on U.S. federal lands or lands owned by Native Americans. In such cases, a predetermined royalty payment of 12.5% is taken off the top of the cash flow stream. The oil company projects the royalty payment into the economics of the transaction; if the forecast cannot sustain the royalty burden, then the venture does not happen. The oil company is not involved in the politics or policies concern with how the royalties are spent or distributed. It simply pays the royalty fee as directed by the lease terms.

Should benefit sharing ever become an obstacle to space commerce, space companies may want to consider establishing a similar royalty payment system. A royalty rate could be agreed upon by the parties, and the royalty burden would be incorporated into the company's economic assessment of the project. An entity, perhaps the UN or one of its agencies, could be designated to receive the royalty payments. As a result of this approach, the space venture would be free to focus all its energies on appropriate business planning, policymaking, and management issues.

The Specific Benefits of an Ethical Code

A code of ethics must produce benefits for businesses operating in space. In turn, there must be a genuine commitment to ethical business operations by all employees for the code to have true meaning and influence. Here are some of

the major benefits that would result from acceptance of a viable code of ethics:

1. Ethically developing an off-Earth economy assures responsible use of resources and establishes a moral precedent for future generations of explorers and settlers.
2. The code of ethics would facilitate off-Earth commerce. Ethically focused space ventures reduce the risk of government interference and popular opposition. Businesses that consistently follow ethical guidelines will bring the development of an advanced off-Earth to rapid reality.
3. All off-Earth commerce would be more carefully considered, planned, and implemented.
4. Safe and thoughtful development of off-Earth resources would benefit the billions of people who live on Earth. Examples of benefits include medical and other scientific advances. Also, we would become better stewards for our own home, Earth.
5. Businesses that have adopted an appropriate code of ethics would attract employees of a higher caliber, employees who are genuinely concerned about the ethics of their work. The quality of management would therefore be higher. The most conscientious prospective employees are naturally interested in the social and political ramifications of what they do and how the company's products would affect others and the environment. With an appropriate code of ethics in place, employees would

have a higher purpose and thus greater job satisfaction.

6. Businesses that genuinely accept and work with a code of ethics would tend to be the innovators in the industry.
7. Acceptance of an appropriate code of ethics would enable space companies to operate from a more long-term perspective.

The Proposed Code of Ethics

A code of ethics for businesses engaged in off-Earth development follows, introduced by a preamble and defined by numerous principles, each with a brief explanatory note. The principles are presented in order of their importance, beginning with the most critical; however, each is important in its own right and an integral part of the entire code of ethics. Note that this code addresses solely those issues pertinent to space development and will evolve as new issues arise in off-Earth development.

An important point to make about the code of ethics proposed in this paper is that it empowers businessmen and -women by calling upon them to carefully consider sensitive issues without dictating how these issues are to be resolved. Underlying this code of ethics is the assumption that creative, competent, and committed people will eventually find solutions to difficult problems. The code encourages the business community to adopt such a mindset.

Preamble

We, the people, in order to profess our deep concern and care for outer space and its resources, subscribe to this code of ethics for off-Earth economic development. We recognize the importance of outer space to people everywhere. To ensure the most ethical and most efficient economic development, to commit to consistent protection of outer space and its celestial bodies, and to engage in space commerce unfettered by government or other regulatory barriers, we hereby establish and accept this code and its unique objectives:

We value the unique nature of outer space and pledge to respect its special qualities at all times.

We agree to develop off-Earth resources in ways that provide maximum benefit to the greatest number of people.

We agree to be responsible and accountable for how we develop and use the resources found off Earth.

We will conduct all business dealings with integrity, honesty, and fairness.

We will consistently strive to promote a positive work environment that supports the spirit of this code.

Principles

1. ***We will consider the effects of all off-Earth development on future generations that will live and work in space and on Earth.***

Our commitment to those who come after us is sacrosanct. This principle reminds participating businesses to

carefully consider how their actions will influence future generations both on and off Earth.

2. *Our business dealings in space and on Earth will be of the highest level of integrity, honesty, fairness, and ethics.*

This principle illustrates a company's commitment to be at the forefront of the commercial space industry by consistently demonstrating the qualities described in this code of ethics. All employees will model these qualities in their thoughts and actions on behalf of the company.

3. *We are committed to ensuring a free-market economy off-Earth.*

This principle confirms the importance of promoting efficient economic development off Earth.

4. *We agree to treat outer space with respect, concern, and thoughtful deliberation, regardless of the presence or absence of life forms.*

While outer space, to the best of our knowledge, represents a collection of nonliving natural objects, this principle requires extra caution in all business operations. Because of our limited understanding of outer space, we acknowledge that our presence there may have unforeseen results.

5. *We will strive to be good stewards of outer space and all its economic resources.*

This principle stresses the commitment to thoughtful long-term planning.

6. *We support the environmental protection of certain areas on the Moon and other celestial bodies, just as there are environmentally protected zones and designated areas on Earth.*

On Earth we have designated certain areas as parks, wilderness areas, and other protected zones. This principle communicates the need for similarly designated areas on Mars, the Moon, and other celestial bodies, under the auspices of a celestial or other properly designated authority.

7. *All company employees, as well as other people working with the company, agree to be responsible and accountable for the ethical economic development we as a company undertake off Earth. Company executives, in particular, agree to demonstrate ethical leadership and compliance with this code of ethics.*

Ethical business operations are more likely when all individuals associated with the organization, especially those in management, are accountable.

8. *We will manage the company with consumer and product safety in mind.*

This principle establishes a concern for the safety of customers.

9. *Our company will establish a corporate ethics committee to address issues of an ethical nature and to approve all off-Earth business ventures.*

The creation of an ethics committee representing both executives and employees reinforces the intention of this code of ethics.

10. *Conflicts of interest are to be fully disclosed to the ethics committee.*

As soon as an employee becomes aware of a real or potential conflict of interest, the conflict must be reported to the ethics committee. If the conflict of interest contradicts any provisions of the ethics policy adopted by the company, the ethics committee will suggest possible remedies to minimize or eliminate the conflict.

11. *Our company will make full and immediate public disclosure of any contribution made to any political candidate or organization. The company's ethics committee will approve all such contributions.*

This principle, while allowing for political contributions, ensures prompt public disclosure and that all such political activities on the part of the organization receive prior approval by the ethics committee.

12. *Our company will work within the industry to create legitimate supervisory organizations, either public or private, designed to monitor and support the ethical development of space commerce.*

This principle provides for independent sources of feedback to assist the company and the commercial space industry with the development and enforcement of its code of ethics.

Conclusion

Adopting a code of ethics for commercial off-Earth development makes practical sense from two important perspectives. First, through assuring people

and governments that commercial space development will be pursued in a thoughtful, careful, and ethical manner, potential barriers to space commerce can be minimized or eliminated. Second, adopting an ethical approach to conducting business off Earth is simply the right, intelligent, and safest action we can take. If the space industry does not develop its own ethical guidelines for commercialization, there is a risk that less-than-favorable guidelines would be imposed on the industry, guidelines that may well restrict economic development in space.

Ray Bradbury, the noted science-fiction author, was one of several speakers at the Space Frontier Foundation Conference in 1999. Mr. Bradbury was asked why there is a need for a code of ethics. In response to this question, which suggested that developing space resources and forming off-Earth settlements is premature in light of the wars, violence, and other unsolved problems on Earth, Bradbury advised: "Go into space. Go to the Moon, Alfa Centauri, and Mars. It may not be nice because humans are not nice. But we will also take with us Shakespeare, Emily Dickinson, and others. And it will be fine for the human race."¹²

This quotation from Ray Bradbury suggests that we need not plan, that we need not be concerned with the ramifications of space development. While I support Bradbury's insistence that we establish off-Earth settlements, I also believe that we will have to work hard to realize the ethical development of outer space. Although capitalism will likely be the basis for the economic system we take into space—and I believe the free-enterprise system is desirable as an engine of economic growth—we cannot ignore

potential abuses. The corporations cited earlier as examples of irresponsible business practices demonstrate just how

easily executives can be seduced by the profit motive to the exclusion of other concerns.

Developing outer space by using an ethical, free-market approach will require the commitment and the presence of mind to make moral issues equal in importance to financial issues. While the challenge may be formidable, it can be done. Adopting a code of ethics is a significant first step.

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