COOPERATION: EMBRACING OUR HERITAGE

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"I'm from Missouri, Show Me!"

AIM

This article will explore whether and how W. Edwards Deming's System of Profound Knowledge and 14 points for Management can be implemented in a world of egoists without central authority. Fundamentally, the question to be considered is how interactions among individuals lead to an emergent system and the implications of such an emergent system for the implementation of the System of Profound Knowledge and the 14 points for Management, in specific, and for the business enterprise and society, in general.

INTRODUCTION

In 1993, W. Edwards Deming introduced in his book, "The New Economics", a System of Profound Knowledge.

> The route to transformation is what I call *Profound Knowledge*. The system of profound knowledge is composed of four parts, all related to each other:
>
> - Appreciation for a system
> - Knowledge about variation
> - Theory of Knowledge
> - Psychology

This book laid the foundation and outlined an understanding of how organizations SHOULD work so people need not live "under the tyranny of the prevailing style of management". Further, he stated that "it would be better if everyone would work together as a system, with the aim for everybody to win". If person X AND person Y are guaranteed to win rather than a chance that one of them could lose, should not both follow this sage advice and adopt the sane strategy? So why have we not?

In 1982, Dr. Deming contended in his book, "Out of the Crisis", that "the basic cause of sickness in American industry and resulting unemployment is failure of top management to manage. He that sells not can buy not". Further, "everyone doing his best is not the answer. It is first necessary that people know what to do. Drastic changes are required. The first step in the transformation is to learn how to change: that is, to understand and use the 14 points … and to cure themselves of the diseases".

His prescription for the recovery of U.S. businesses consisted of the 14 points for Management which "follow naturally as application of the system of profound knowledge, for transformation from the present style of management to one of optimization".

These 14 points of Management for the basis of transformation are:

- Create constancy of purpose towards improvement of product and service
- Adopt the new philosophy
- Cease dependence on mass inspection
- End the practice of awarding business on the basis of price tag alone
- Improve constantly and forever the system of production and service
- Institute training
- Adopt and institute leadership
- Drive out fear
- Break down the barriers between staff areas
- Eliminate slogans, exhortations, and targets for the work force
- Eliminate numerical quotas for the work force; Eliminate numerical goals for people in management
- Remove barriers that rob people of pride of workmanship
- Encourage education and self-improvement for everyone
- Take action to accomplish the transformation

According to Dr. Deming, these 14 points for Management could be applied to small and large organizations as well as to divisions of companies, and there was "no distinction between manufacturing and service industries". All of these organizations and divisions required transformation since they were "subject to the same principles of management". Again, would an afflicted person refuse or deny treatment that was a certainty? Why do we?

Perhaps an answer to the questions posed above is that like the person from Missouri, we say "Show me". After all, we are wired and conditioned by our biology and society to demand "proof of concept". There is a balance between skepticism and faith that we all achieve to varying degrees in any given situation. Fair enough.

The proof. Starting in the 1950s, Dr. Deming advised the Japanese using the very points made above, and urged them towards a transformation of their war-torn industries and nation. Those encounters resulted in Japan Inc., the dreaded juggernaut opposed by the United States during the 1980s. Japanese products and services enjoy a measure of respectability unparalleled (except by Germany) in the world. And in Dr. Deming's words:

> If Japan be an example, then it is possible that any country with enough people and with good management, making products suited to their talents and to the market, need not be poor. Abundance of natural resources is not a requirement for prosperity. The wealth of a nation depends on its people, management, and government, more than on it natural resources.

Lest the reader have "the impression that no action is taking place", the 14 points are being used by "management throughout a number of firms, and substantial results are already recorded."

"How are we doing?" Dr. Deming recognized that "when we size up the job ahead, it is obvious that a long thorny road lies ahead – decades." But is that it? Even with the principles, proof of concept and people believing in the transformation, is it just that simple? Is time all that is required to adopt Dr. Deming's philosophy?

Some sample adoption rates. For example, once Christopher Columbus made it to the New World, the Europeans sailed like mad to the new frontier. Further, the number of Internet users reached 100 million within 5 years; cable television users increased by 25 million users in 5 years; number of households with television increased to 30 million in 5 years; etc… The point here being simply that we are rather willing to embrace change that will benefit us in some manner at an increasingly faster pace. However, the number of firms having adopted and implemented Dr. Deming's principles remains deplorably low.

Other considerations. Perhaps not enough people have heard of the new transformation? Dr. Deming visited hundreds of companies and met with top levels of management during his 40+ years as a consultant. He held four-day seminars on the transformation needed for a new style of management that reached 10,000 people per year for over ten years. He authored numerous books and articles about the need for improvement in management. These numbers alone are staggering enough to rule out the secrecy argument. It brings to mind a TV show from the 1960s,

Gilligan's Island, where the running joke for the audience is that everyone in the world has visited this island of seven stranded castaways, and yet no one talks about it or attempts to rescue them. Is that the case here? A case of not having heard the boy in the crowd who has yelled that "the emperor has no new clothes"?

Perhaps those that have gone to the seminars, been exposed to the System of Profound Knowledge, read the books, etc… simply do not understand or grasp the principles. This argument does not merit more than this simple question: Two choices, a guarantee win or a chance (maybe 50% or more or less) at losing. Which do you pick? As discussed below, the difficulty in implementation lies not with the people's understanding.

Why have we not adopted the new philosophy? This article will demonstrate that the main determinant for adoption and implementation of Dr. Deming's philosophy lies in the emergent system created from the interactions of individuals in a world of egoists without central authority. The current system is a competitive system whose objective thwarts our evolutionary heritage of cooperation, and leads to a society that is "too clever by half". Such a system switches a cooperative Win-Win framework (where the enterprise has no choice but to win) to a competitive Win-Lose framework. And then in this Win-Lose framework, the enterprise's resources are expended to avoid losing as it defends itself from the predictable retaliatory attack of its prey, and the situation drifts into a Lose-Lose spiral.

A consideration for a bottom-up approach. In the System of Profound Knowledge and the 14 points for Management, the implementation is management's responsibility.

> A system must be managed. It will not manage itself. Left to themselves in the Western world, components become selfish, competitive, independent profit centres, and thus destroy the system. The secret is cooperation between components toward the aim of the organization. We can not afford the destructive effects of competition. It is management's job to direct the efforts of all components toward the aim of the system.

This approach is a top-down approach whereby management is responsible for the actions and direction of the system. The obvious solution seems to be to train the top level management (as Dr. Deming did) of the firms around the world, and the need for this article disappears. Of course, this was the approach tried by the former U.S.S.R. albeit without the benefit of Dr. Deming's principles. What went wrong there? The answer, while seemingly contradictory, is that there was (and still is) no central authority.

No central authority. To wit, there is a system in the world that transcends all others. It is the emergent system based on the dynamics of interactions of every being with every other being on this planet. For the most part, we may even confine every species to interactions among its own members. For this system, there is no central authority which has the ability (we will leave aside the question of the religion and next world) to direct the efforts of all components toward the aim of the system. In this sense, the ultimate system is not managed, and a top-down approach can not be implemented for the very reason of Dr. Deming's favorite question: "By what method?" The significance being that how could one be absolutely certain that the components of the systems are behaving as according to the needs of the system and not according to their self-interest. The Soviet authorities tried intimidation, fear, etc… but even they could not always be sure that every one was following the plan. People will behave in self-interested ways that may be contradictory to the needs of the system (*vide infra*). Indeed, the only option remaining is the bottom-up approach for implementation, and this is where the problem lies as we shall see below.

In order to analyze this bottom-up approach, the interactions among individuals are key since these interactions give rise to the emergent system and are also responsible for the determining the aim of the system. Further, these interactions arise out of our biological and evolutionary tendencies. Thus, threads from biology (*i.e.* evolution and natural selection), game theory, and economics become relevant in order to weave the tapestry that models reality, and point out the direction to be taken in this bottom-up approach to implementation of Dr. Deming's System of Profound Knowledge and 14 points for Management.

WORLD OF EGOISTS

Selfish genes, selfish individuals. Our minds and bodies have been built by selfish genes. We are essentially survival machines created by genes in order for genes to propagate. Rather than being a subjective or anthropomorphic argument, this is an issue of behavior. Selfishness, as used herein, is defined as that behavior which allows for the survival and propagation of a gene into the next generation. To take the negative, any behavior that was not selfish would result in that gene not being represented in the next generation. So only those genes that were selfish get a chance to be in the next generation. How does that lead to a selfish survival machine (*i.e.* individual)?

Genes, those bits of DNA that direct all the functions of our cells, existed as individual bits of molecules. By chance, some of these molecules got together and were able to form greater structures that allowed for increased representation of their progeny in the genetic pool. The reasoning is that through increased stability, robustness, number of progeny, adaptability, etc… these greater structures allowed for the increased representation in the next generation. Follow this reasoning *ad nauseam* forward, and natural selection leads to one-celled creatures, groups of cells, organs, tissues, and multi-celled organisms. Of course, the selfish genes all get propagated along with the organisms. Further, if some (or all) of genes give rise to an ability such as "intelligence" which enhances the survivability of the organism, then so much the better for the genes. In effect, the genes have created a survival machine for their own propagation. And the selfish gene gives rise to a selfish individual. Again, if the genes do not make the individual selfish, then the individual might not pass the genes along. Thus, we live in a world of egoists (*i.e.* selfish or self-interested individuals) without central authority.

I am not selfish. What about altruism? As defined earlier, selfishness is the any behavior that allows for survival and propagation of that behavior. In this sense, altruism may appear to be non-selfish but is selfish behavior. For example, a mother raising her children or saving them from harm may appear to be manifesting altruistic behavior, but in essence, the behavior ensures the survival of her genes that are in her progeny. And in such light, her behavior is selfish. Thus, there may be behavior that appears to be altruistic on the surface but at a deeper level is defined to be selfish.

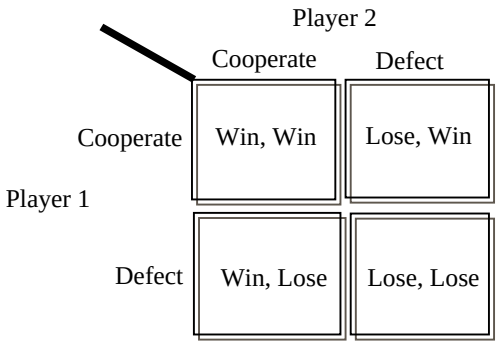
In another example, let us suppose that a group exists that is composed completely of altruistic individuals. Then by virtue of mutation, migration, or variation, one individual appears who is able to exploit the altruism of the group for his own survival as well as his children's survival. After a few generations, this group of altruistic individuals will be changed to a group of selfish individuals due to the exploitation by the descendants of the original selfish individual. Once again, we arrive at the world of egoists without central authority.

> *"Give, and it will be given to you; good measure, pressed down, shaken together, running over, will be put into your lap. For the measure you give will be the measure you get back."*

GAME THEORY

Now that we have firmly created a world of egoists without central authority, how do we weave their interactions into the tapestry? How do we model the behavior of such a group of selfish individuals? For that insight, we turn to an intersection of economics and biology known as game theory. Originally developed in economics to model rational behavior of humans, game theory was adopted by biologists to model population genetics, and then transferred back to economics with added concepts from biology. Game theory is concerned with an area where the right thing to do depends on what other people do (*i.e.* human interactions). It is the study of mathematical models of conflict and cooperation between *intelligent and rational* decision makers. An *intelligent* decision maker being an individual who understands the situation, including the fact that others are intelligent rational decision makers, and a *rational* decision maker being an individual who maximizes her expected utility.

Prisoner's dilemma. The best known model from game theory is the Prisoner's dilemma. First formalized as a game in 1950, it is a stark example of how to achieve cooperation among egoists that is not dependent on taboos, morality, ethics, or any other subjective measures. Although the situation as conceived refers to prisoners, a simplified version is presented in the payoff matrix of figure 1 below.



As shown in the matrix, each player has two choices: cooperate or defect. Neither player knows the move of the other beforehand. The choices are made simultaneously. If both players choose to cooperate, then each player wins. If they both decide to defect, then each player loses. If player 1 cooperates and player 2 defects, then player 1 loses while player 2 wins. And finally, if player 1 defects and player 2 cooperates, then player 1 wins while player 2 loses. The rational selfish choice is for each to defect, no matter what the other player does. Thus, the dilemma is that each player defects and loses. And by doing so, each does worse than the possible wins by both, had each player cooperated. Thus, for this world of egoists without central authority, a win-win framework was converted to a win-lose framework and led to the lose-lose spiral.

> *Another example*. Twenty people sit, each in a separate cubicle, with their fingers on buttons. Each person will get $1000 after ten minutes, unless someone pushes his button, in which case the person who pushed the button will get $100 and everybody else will get nothing. If you are clever you do not push the button and collect $1000, but if you are very clever, you see that there is a tiny chance that somebody will be stupid enough to push his or her button, in which case you are better off pushing yours first, and if you are very, very clever you see that the very clever people will deduce this and will push their buttons, so you, too, had better push yours. As in the prisoner's dilemma, true logic leads you into collective disaster.

Tragedy of the Commons. This is being "too clever by half". Broadly speaking, any situation in which one is tempted to do something, but knows that it would be a great mistake if everybody did the same thing, is likely to be prisoner's dilemma. In an all cooperating world, anyone can make themselves better off by defecting so everyone starts to defects since those that remain cooperative get nothing. It is the collective price of individualism.

Some consequences of win-lose and lose-lose framework. Competition permeates our culture. In the courts, we use the adversary system. Political parties strive to win elections and to win points in legislatures. Debates are common at schools, universities, and in the media. Competing with and defeating an opponent is the most widely publicized aspect of a good deal of our sports and recreation. The language of business, politics, and even education is dotted with win-lose terms. One "wins" a promotion, and "beats" the competition. Students strive to the "top the class" or to "outsmart" the teacher. Although we do recognize cooperative effort and collaboration, it seems that we tend to emphasize "healthy competition".

Win-Lose contests can develop in organizations. Individuals may strive for the dominant position. Battles can rage between departments. For example, a planning department may develop a new assembly procedure. The assembly department workers may resent it and lock horns with planners. It is easy to interpret the situation in win-lose terms. The planners are showing that they can design a procedure better than those on the job. If the new procedure works well, the planners "win". On the other hand, if the innovation does not improve production, the planners "lose," and, in a sense, the assemblers "win". In this light, the workers may not give the innovation a fair trial. In extreme cases, they may even sabotage it "to show them who's in charge". In some companies and institutions, internal win-lose rivalries absorb more effort than the main production or service.

Win-Lose poisons interpersonal relations as well. Suppose a husband loses an argument with his wife so that they go dancing instead of to a horse race. He can retaliate by being sullen or obnoxious. He has turned a win-lose situation into an ordeal where both partners are miserable. Again, Win-Lose has become Lose-Lose.

Win-Lose strategies:

- divert time and energy from the main issues
- delay decisions
- create deadlocks
- drive unaggressive committee members to the sidelines
- interfere with listening
- obstruct exploration of more alternatives
- arouse anger that disrupts a meeting
- interfere with empathy
- leave losers resentful
- incline underdogs to sabotage
- provoke personal abuse
- cause defensiveness

Some examples of being too clever by half. The dot-com meltdown is as impressive as the boom that preceded it. Over 150 (and counting) companies have ceased operations, and thousands of employees have lost their jobs. Further, billions of dollars in capital value have disappeared. What happened?

In California, the state government is struggling to meet consumer power demands while the power suppliers are going bankrupt. The blame is making its way around from politicians, regulators, lobbyists, suppliers, consumers, technology, etc… What happened?

As noted above, Japan, Inc. was once a formidable world power. Nowadays, the "Inc." could stand for "incoherent" among other things. What happened?

In each example, the Win-Win framework was replaced by a Win-Lose framework that drifted into a Lose-Lose spiral. The key question being: who wants to lose? The answer: no one.

Initially, the Internet was used to connect people with each other. There was no competition. Then into this milieu, the first commercial enterprises started. At the start, they were not competing against any other firm or industry. The firms were delivering products and/or services which did not cause any other firm to lose. In fact, the firms enhanced or helped other firms in the marketplace. Yahoo! helped advertisers reach targeted audience segments. AOL connected users to the Internet. eBay connected sellers and buyers that had no other method. Then came the first major competitor, Amazon. Amazon's model was based on a Win-Lose framework. It was competing directly against book distributors, book retailers, and others later on. It has never made a profit, and recently the firm announced layoffs of more than 1500 people. Many firms (Priceline, pets.com, boo.com, etc…) that came during the boom were competitors of one sort or another offering lower prices on products or services as compared to existing businesses. In effect, the dot-coms were going to win by making others lose. The response is predictable. Businesses will not sit by idly for death. They will retaliate. Now the Win-Lose framework drifts to a Lose-Lose framework as each side goes about trying to win by making the other side lose. And as more and more of the resources of each side become devoted to defense from such attacks, the Lose-Lose spiral starts.

In California, the regulation of wholesale power prices was a Win-Win framework for all parties involved. As soon as the price was deregulated, the win-win became win-lose due to the competition. Once again, in the win-lose framework, none of the parties wants to lose, so more and more resources become devoted to avoid losing. In this case, power has become such a basic modern necessity that the government has to step in to stop the crisis.

The drumbeat of competition and open markets from the United States led to the downfall of Japan, Inc. As the Win-Win framework in which all aspects of Japanese society worked gave way to the Win-Lose framework demanded by the outside world, the Japanese enterprises became victims of the same Lose-Lose spiral mentioned before. Further devastation came as one of Dr. Deming's fears was realized. "It would be a mistake to export American management to a friendly country". To Dr. Deming's chagrin as more of Japanese management trained in the United States, they began implementing the U.S. style management policies at their firms. These policies only served to further exacerbate the downward spiral of Japan, Inc.

Trouble ahead. The outcome between China and the United States on the deployment of the missile defense shield by the United States will have serious global repercussions and must be managed properly. Regardless of how the United States views the situation, China will come to view the deployment of a missile defense system as a Lose for their side. The reaction is predictable. The Lose-Lose spiral will continue. A Win-Win framework must be worked out since neither side is willing to lose.

Iterated Prisoner's Dilemma. The iterated prisoner's dilemma is the same as the prisoner's dilemma except carried out multiple times with the same players. The repetition (and the chance of future encounters) changes the strategy involved. Briefly, in the single move Prisoner's dilemma, the strategy for each player is to always defect. However, in the multiple move game, each player can build trust over time and can hope for reciprocity from the other player. This has the effect of changing the game from a zero-sum game to a non-zero sum game. For example, Player 1 may hope that player 2 cooperates, in return for player 1's cooperation on the next move. Player 2 deduces the same. So each player's first move should be to cooperate. Once this becomes evident and each side "wins", they can continue to cooperate on each subsequent move. If there are an indefinite number of moves, then each side has the incentive to cooperate indefinitely. The game remains a non-zero sum game because the future looms large and remains important. However, if there are a finite number of moves, then on the last move, each player has the incentive to defect since no other opportunity to interact (neither player may be rewarded or punished after the last move) is available. No future looms large.

An example. Why do firms escort the employee out of the building when s/he is being fired? If the employee's expectation is that no future interaction may take place with the firm, then there is a danger of "defection" (*i.e.* damaging the firm in some manner, an action unlikely to be taken when there is the hope of future encounters).

A second example. Even at its very nadir, civilization finds a way to cooperate. During the trench warfare of World War I, considerable restraint was shown by the French and German soldiers all along the front lines. Why? The units facing each other across no man's land were playing out the iterated Prisoner's dilemma. In this case, the entrenchment of the soldiers led to the local group of opposing soldiers to be in daily contact with each other, and a live and let live system developed. The future loomed large for each side, and the payoff for each side was such that it was in each side's best interest to practice restraint and hope the other side would do the same. Of course, defection was met by swift retaliation. In repeated encounters, mutual cooperation can emerge rather than mutual recrimination because the future becomes important.

Various strategies. Most of life is a non-zero-sum game. Both sides can do well or poorly. Mutual cooperation is often possible but not achieved. Repeated encounters are possible. Individuals do not know what the response of another will be ahead of time. Payoffs may be different for each player. And a host of other reasons make the iterated Prisoner's dilemma a useful model for a wide variety of everyday situations. Further, there are many strategies that a player may choose to use. Remember, in the single move game, the strategy was clear-cut, always defect (AD). Here, due to the repeated encounters, players may use a single strategy or mix several strategies for optimization of selfishness. Two strategies have been shown to be useful for selfish players in the iterated prisoner's dilemma. One strategy is the just mentioned always defect (AD) while the second strategy is called Tit for Tat (TFT). The AD player will always defect because the payoffs are such that defecting is the appropriate response. Also, there are some elements of the situation which lead to the AD strategy (*vide infra*).

Tit for Tat. TFT is the strategy that always cooperates on the first move and then repeats the previous move of the opposing player for its own next move. So that as long as the opposing player cooperates, a player using Tit for Tat will also cooperate. A defection leads TFT to retaliate in kind on the very next move. Of course, cooperation is

restored if the opposing player does not defect. In computer simulations and tournaments against a wide variety of other strategies, TFT has been extremely successful, more than any other strategy. This is due to its four main features:

- Niceness: TFT is nice and so it does not get into trouble.
- Retaliatory: TFT instantly retaliates, so it is not a push-over.
- Forgiving: TFT does not hold a grudge. It only retaliates once on the very next move.
- Clarity: TFT is intelligible to the other player. Easy to comprehend what one is up against.

Additionally, TFT has two other features that become relevant for the bottom-up approach. One, TFT has been shown to be an evolutionary stable strategy (ESS). A strategy is considered to be evolutionarily stable if a population of individuals using that strategy cannot be invaded by a rare mutant adopting a different strategy. This means that a group of individuals using TFT as their strategy can not be invaded by some individual using AD as a strategy. The previously given example of altruistic individuals being invaded by a selfish individual and changing the group dynamic to selfishness would not happen if altruism was an evolutionarily stable strategy. Two, TFT can invade other strategies, such as AD, and become the new strategy of the population. However, a single TFT individual cannot accomplish this. There has to be a cluster of TFT individuals that interact with each other as a cohort as well as minimally interacting with the other strategy in the population for the TFT to take over after some generations. How many in a cluster would be needed? The research is unclear on this point. The author takes a guess at a cluster of 150 TFT individuals as being sufficient (The reader is encouraged to read The Tipping Point by Malcolm Gladwell for the reasons) to invade another population.

World of Egoists and Game theory. By exploring the field of game theory, we have seen how the iterated prisoner's dilemma models reality rather closely. Further, two elemental strategies for the iterated prisoner's dilemma are evident (and in fact, seen to be in use by many species of animals) and available (singly, combinatorially, modified versions) for use by a world of egoists without central authority. The AD strategy leads to a lose-lose spiral if implemented in all interactions. Evidence has been given that while we were created out of selfish needs, we have been built to be social, trustworthy, and cooperative. We have social instincts, are equipped with pre-dispositions to learn how to cooperate, to discriminate the trustworthy from those that are not, to earn good reputations, to exchange goods and information, and to divide labor. In fact, our physical self and our society have evolved together, and our civilization is based on cooperation. It is in our heritage to cooperate because the future looms large for us. We may have repeat encounters with individuals and that leads us towards cooperation. That being the case, the world is not modeled by the AD strategy exclusively. TFT is a robust strategy and seems to model reality a little more accurately. However, individuals in society are not always cooperative. Thus, the world of egoists without central authority may using a mixture of AD and TFT strategies in interactions with each other.

Dr. Deming's System of Profound Knowledge and 14 points for Management in all of this. The threads from evolution, natural selection, and game theory have been woven into a piece that points to using TFT as the vehicle for implementation of Dr. Deming's philosophy. The resistance to application of his principles can be seen as people using the AD strategy to defect when payoffs are so structured. As already noted, the tendency to cooperate contributes far more to fitness than any competitive inclination. However, there are incentives being given to urge more competition. These incentives keep altering the payoffs so that our natural inclination towards cooperation is thwarted. What is the solution? The exploration above has shown that TFT is an ESS and can invade any other strategy if done by a cluster of people. So the bottom-up approach for implementation of the System of Profound Knowledge and the 14 points of Management would be to use a cluster of TFT individuals that invade the current system and change the payoffs to encourage cooperation.

How the transformation can be accomplished using TFT. There are two cases to be dealt with here. One situation is where the "system" (*i.e.* the given situation) is fixed, and the TFT individual must respond. In such a position, the participant may follow these four suggestions:

- Don't be envious
- Don't be the first to defect
- Reciprocate both cooperation and defection
- Don't be too clever

If the interaction is durable and long-lasting, then an egoist will cooperate and not resort to attainment of short-term benefits by defection. For the second case, steps can be taken to promote cooperation by changing the strategic setting in such a manner that all individuals will adopt a cooperative stance. These steps are:

- Enlarge the shadow of the future
- Change the payoffs in the matrix
- Teach people to care about each other
- Teach reciprocity
- Improve recognition abilities

A drawback. The primary caveat is that each individual has a different interpretation for what it means to cooperate and defect. An individual may be cooperating but be seen as defecting. This may lead to a retaliatory attack by the other individual, but this retaliation may be seen as an unprovoked defection by the first individual. Obviously, the implications of this scenario are far-reaching.

"Survival is optional"

CONCLUSION

This article has tried to weave several fields of inquiry together and demonstrate how resistance to implementation of Dr. Deming's System of Profound Knowledge and 14 points for Management may have developed in a world of egoists without central authority. Also, the article outlines a possible mechanism to overcome this resistance to implementation. A bottom-up approach to changing the emergent system created by the interactions of a world of egoists without central authority. The implications for living in a win-win framework are clear. It is a framework to be preferred over the current win-lose framework in place. Do you want to lose? Neither does anyone else. The transformation is everyone's job. As Dr. Deming said, "We live and work in a prison. Working hard within this prison produces nothing. We cannot remodel the prison; we must get out of it. To do this, a transformation is required. Cooperation between people, companies, government, countries. There will be joy in working. Everyone will win."

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