

The Entitlement Paradox

by Russell Sears

Islands such as the Galapagos have been incubators for the way species evolve. Many have written on the competitive phase of the evolutionary process. Species adapt to perfect their strategic advantage, through natural selection or “survival of the fittest”. However, these islands illustrate other evolutionary strategies: “survival of the first” or “survival of the few”. Imagine the first lucky seed, birds, turtles or goats that found or were abandoned on these paradises. With plenty to eat and few or no predators, the population would explode quickly. Evolutionary math suggest that these strategies are filled with rapid expansion of populations and a race to become the dominate species of this new territory¹. Competitive pressure to perfect the niche strategy would ensue. Competition does not always result in a better and stronger species. Often these overcrowded populations can go into boom and bust cycles. The population swings can make a species vulnerable to extinction. If the environment becomes fragile, due to overcrowding, the natural incentives of self-preservation and high pro-creation rates can result in tragic consequences for the species as a whole.

A rather simple formula $P(t+1) = R \times P(t) (1 - P(t))$ has some interesting properties². When $P(t)$ is interpreted as the percentage of the maximum population at time (t) , $(1-P(t))$ is the preventive drag for the next generation to reproduce, and R is the reproductive rate; this equation can illustrate both the boom and bust cycles that can occur. Further, if $R \geq 4$, the future forecast becomes harder to predict. This illustrates Lorenzo’s famous “Butterfly Effect”. A very small difference between $P(0)$ (one that environmentally would be impossible to measure) can have a completely different pattern of booms and bust. These small differences in starting points can have much longer or shorter time periods until the points of extinction. Nature seldom simplifies the survival battle into such neat equations. Despite the more complex dynamics, nature does sometimes have similar resulting outcomes. Examples include:

1. Artic timber wolves and snow hare populations can have well defined boom and bust cycles similar to the simple equation when $3 > R < 4$.
2. The gypsy moth caterpillars can cannibalize their young into eradication of the next generation similar to when this equation is $R > 4$.

Man’s intelligence and ability to innovate has allowed us the ability to create a new environment on terms that give us a competitive advantage. Beyond innovative ideas, and communications with cooperation is key to such massive efforts³. The rational basis for the evolution of altruism and cooperation can be explained by understanding the different optimal strategies for different types of “Prisoners Dilemma”. See table below:

¹ *Evolutionary Dynamics: Exploring the Equations of Life*; by Martin Nowak; 2006

² “When Algebra Gets Chaotic”; by David Snell; Jan. 2012, *Forecasting and Futurism*

³ SuperCooperators; Altruism, Evolution and Why We Need Each Other to Succeed; by Martin Nowak and Rodger Highfield; March 2012

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Prisoner Dilemma From Wiki	Prisoner B stays silent (cooperates)	Prisoner B betrays (defects)
Prisoner A stays silent (cooperates)	Each serves 1 year	Prisoner A: 3 years Prisoner B: goes free
Prisoner A betrays (defects)	Prisoner A: goes free Prisoner B: 3 years	Each serves 2 years

If the Prisoner Dilemma is a single event, then the optimal strategy is to betray the partner. There is no prior knowledge and the expectation is the partner will rationally behave in his best interest to your detriment, e.g. haggling with a car salesman. He will not give you the lowest price up front. You will not disclose your spouse insist that you get this car.

If however, there are infinite repetitions of the prisoner’s dilemma; then the optimal strategy is full loyalty/cooperation the first time; and thereafter return in kind. An example here is when your reputation is on the line (or businesses reputation). When it comes to signing the contract for the title to the car, then it is expected for both sides to be honest and loyal. It is rational to assume that the other side will behave equally rationally and protect their reputation and the business’s reputation.

Ants and humans are examples of “super-cooperators”. Ants however, are instinctively programed to cooperate, to be loyal and altruistic. This gives rise to the “devious ant” strategy. The optimal strategy for an ant would be to be disloyal. The other fellow ants would not be capable of changing strategies and return in kind, yet, the devious ant would benefit by betraying others and still reap the benefits of cooperation. To prevent this they are also instinctively tribal and war with outside tribes.

Humans can change strategies, but often are slow to recognize the disloyal person. As humans, you realize that while the assumption is towards altruism and trust, we also can "return in kind" once we acknowledge we've been deceived. The "devious ant" recognizes the deception will not go on forever. For an individual that expects the game to end soon, but believes others think it will continue, then the optimal strategy is to be the first devious ant and exploit others naiveté.

See table 2

Type Prisoners Dilemma	Optimal Strategy	Examples
One time no knowledge	Betray Partner	Predator Prey- buyer beware
Infinite Repetition	Be Loyal First Time Return in Kind Thereafter	Super cooperators Ants and human ingenuity, contracts Ongoing Business Model
Repeated Process Expected by one side business to end soon	Prey on Others Altruism Naiveté Until They Catch On	Devious Ant-, Bubble Market - Short Term Business Model- (Traveling Salesman)

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Fast growth often leads to a general consensus that a bubble is forming. However, timing the bubble's burst is difficult due to the chaotic nature of overcrowded environments. Since one side is vulnerable to being exploited by the other, often there is a race to be the first devious ant and form tribes. Often when growth or profits start slowing a company becomes vulnerable to these internal pressures to continue the pace, at the expense of the future.

This behavior can have a snow ball effect. One leader uses the "devious ant" strategy and is rewarded for it. Leadership doing this gives a signal that the business model is about to bust; therefore it is every man for their selves. Often incentives are designed so they get rewarded for shifting profits or sales growth, up front at the expense of either outright cannibalizing the future or shifting the risk to a later date and off balance sheet.

This has tremendous potential to recognize when a bubble is about to burst and a business is about to collapse. It shows insiders information. If uncooperativeness, backstabbing and outright deception is increasing in an organization, then there are more and more votes of "devious ant" strategies, More inside people are realizing it is a bubble, about to burst and are taking what benefits/bonuses they can from the business model before it burst.

This explanation of rational evolution of cooperation implies that incentives risk harming, rather than motivating best efforts in the following environments:

1. A prior fast growing or highly profitable niche where growth or profits are slowing.
2. An environment where overcrowding is beginning to happen
3. An environment where insiders see the turbulence occurring, but outsiders do not
4. An environment where one side expects the business opportunity to only last a short time, but the other side expects it to be an ongoing concern.
5. An environment which rewards only profits and growth.

These concepts have many incentive and risk management implications. More businesses are based on innovation and being the first to dominate a niche and as more leaders are approaching retirement age understanding the implications are becoming more important.

Ideas how to identify and mitigate incentive risk are:

1. Watch for signs of niches becoming over crowded.
2. Monitor signs of lack of cooperation and collaboration
3. Selling of companies resilience – expertise, operations infrastructure,
4. "Stuffing the tail"- Under estimating tail risk, and then over-allocating to it.
5. Under estimating chance of long term trends- Government biases and demographic (e.g. interest rates)

People are not entitled to profits and growth. But they are entitled to honesty and respect. The most cost effective incentive programs are those that are based on the ideals stated in the Declaration of

INCENTIVE COMPENSATION: THE CRITICAL BLIND SPOT IN ERM TODAY

Independence-that people are “entitled” to certain inalienable rights. Such incentive programs get at the heart of the collaborative effort by making others feel a part of something bigger than them.

The Entitlement Paradox:

If a leader assumes that all are entitled to respect of ideas/beliefs, cooperation, honesty and altruism; then the leader is entitled to expect the same in kind. This leader will find that people will flock to her shores due to the Liberty and opportunity that will abound. The best and the brightest will make great personal sacrifice to be a part of it and to ensure that it continues. It is the American Way.

If, however, a leader assume that nobody is entitled to anything. It is a dog eat dog world Then the leader is entitled to nothing and can expect the same in kind. This leader will find that he is left with only those that could not leave, that are lucky to still have a job and too defeated to try.