



THINKING TECHNOLOGIES

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Thinking Technologies: A Brief Description

After 45 years of studying the future, we have learned that there are several reasons our track record has been so accurate. One is the way in which we have trained our minds to see more clearly and more objectively. In our global best-selling book *FutureThink*, we explained 16 of these ways, or what we call “thinking technologies.” A sampling of our thinking technologies are described below.

EDUCATED INCAPACITY: SEEING THROUGH ALIEN EYES

We begin learning from the time we are born; and perhaps even before. And the older we get, the more knowledge we acquire, and the more mental baggage gets loaded into our consciousness. But all of this learning can make it hard to see objectively into the future, because we are so conditioned by what we already think we know. We call this educated incapacity: knowing so much about what we already know that we are the last to see the future for those fields in which we are the most knowledgeable. We talk about the need to pretend we are children, or aliens from another planet, in order to see our world for the first time, objectively and with no educated incapacity. Only then can we get the future right. One aspect of educated incapacity is focusing on central/core/accepted assumptions and ignoring many relevant and true things that have been relegated to the background. We call this “figure/ground,” and we have seen remarkable truths and strategies emerge from switching out figure and ground.

TREND/COUNTERTREND

A basic law of physics is that for every action there is an equal and opposite reaction. The same is true in the worlds of economics, politics and social systems. For every trend there is at least one countertrend. Just as in physics, the trends actually cause their countertrends. This forces us to live in a world where developments are not consistent, but often contradictory.

RIGHT-OF-WAY

The railroads never valued the land alongside their tracks and bartered it away for free communications. Today, most digital companies are making all of their money on their rights-of-way as opposed to their core offerings, as are many other companies and entities. The right-of-way is emerging as a significant business model and predictor of future innovation and success.

THE EXTREMES INFORM THE MIDDLE

The middle is generally characterized by inertia. It requires something strong to get its attention and get it to move. Because so much is vying for the attention of those in the middle, actions and ideas have to move further out along the extremes in order to get attention. And those extremes typically become more extreme over time.



SUBSTITUTING THE SPIRAL FOR THE PENDULUM

History advances in cycles, and the common interpretation of this is that something will go just so far in one direction and then swing back, as if along a pendulum. However, nothing ever goes back along the exact same path it came, and because of the intervening time and events, it can never return to the exact point from which it came. It is far more accurate to see these cycles as spirals, circling up, down, and in many directions. The future will always be different.

EFFICIENCY BREEDS VULNERABILITY

Nature provides for a great deal of redundancy. In our drive for efficiency, we often do away with redundancy. But that leaves us vulnerable to attack, to failure, to loss and to obsolescence. The future is much more insecure where there is no redundancy.

THE MULTIPLIER EFFECT OF NEW DISTRIBUTION CHANNELS

We tend to think that the introduction of new distribution channels will subtract from the revenues of existing businesses, but history tells us otherwise. Rather new channels multiply the revenues of existing businesses, but only for those organizations that leverage their competitive advantages correctly. Those who try to ignore the new channels, or to compete with the new channels on the new channels' terms without their innovative prowess, will lag and fail.

ENTROPY

As systems become more complex, the energy in them dissipates over time, eventually leading to a disordered state that requires more energy to control than the energy it took to create the system in the first place. This helps explain why everything from benchmarking to quality initiatives, when copied from elsewhere and not "home grown," often fail.

INTEGRITY BEGETS QUALITY

Because of entropy, many organizations that try to enforce quality by borrowing strategies from others wind up spending enormous amounts of time and energy only to find little or no improvement in their competitive standing. Integrity and trust are central to an employer's contract with its employees, and if these are carefully tended, employees will see their interests aligned with the organization and do their best because it is in their own self interest. Thus, quality by itself takes a lot of work, but integrity begets quality with no additional effort.

THE LAW OF LARGE NUMBERS

The Law of Large Numbers in practical terms means that the larger the number of trials, the higher the probability of a statistically projected outcome. This also leads us to understand that the larger the sample, the more likely a critical mass is to develop around outlying possibilities.



DEMOGRAPHY

One of the most accurate predictors of the future is demography. Since what is already put in place will extend for many years into the future, demography is the cornerstone of many scenarios regarding consumer needs and demands, voting patterns, ideologies, life choices, financial commitments, health, employment and productivity.

COMPROMISE VERSUS LOWEST COMMON DENOMINATORS

We are taught that compromise is always the best solution. But the future will always betray compromise. That is because compromises are lose-lose solutions. They require each party to give up something, and will almost inevitably create new friction. In mathematics, the lowest common denominator is a solution to problems that do not seem to have easy solutions. It requires multiplying denominators, which is something most people never apply to real life. What parties really mean/need/want is often more fundamental than what they say, and if we accommodate all of those underlying necessities without paying sole attention to the verbiage, we can often find solutions that satisfy all parties completely.

THE THREE-LEGGED STOOLS OF THE POLITICAL AGENDA

The metaphor of the 3-legged stool works to simplify and clarify the division in ideology in the U.S. political sphere, and also the division in world views of the male and female populations. We discuss a series of 3-legged stool analogies which demonstrate how the future can become more predictable. When one or more legs on any of these stools are shortened or lengthened out of proportion to the others, the stools won't balance and there will definitely be future consequences.

FOOTBALL MEETS SHOPPING

We use the analogy of a football game, to explain the priorities in the retail environment, and the importance of the touchdown, which is relationship marketing. But relationship is much deeper than it is currently defined in the marketplace. It focuses on barriers to exit, as opposed to barriers to entry. Understanding this entire analogy helps debunk some assumed priorities and redirect energy to more successful business strategies.

MANAGING BY HARNESSING EVOLUTION

Survival of the fittest includes the premises that organisms that breed the most have the highest chance of having their genetic lines survive, and if adaptable, survive and begin to take over. Using these premises, which are highly applicable to management, innovation, products, services, competition and skills bases, can help determine the success of an enterprise's future.

SELF DEFEATING AND SELF FULFILLING PROPHECIES

Peering into the future can lead to visions that, because they are seen, are thwarted and therefore never happen. These are self-defeating prophecies. But having a vision and then working towards making it happen, despite obstacles and opposing trends, can lead to the success of that vision. These become self-fulfilling prophecies. The most successful leaders are those that can do one or the other.

