Managing Permanent Dynamism

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January, 2007

Change

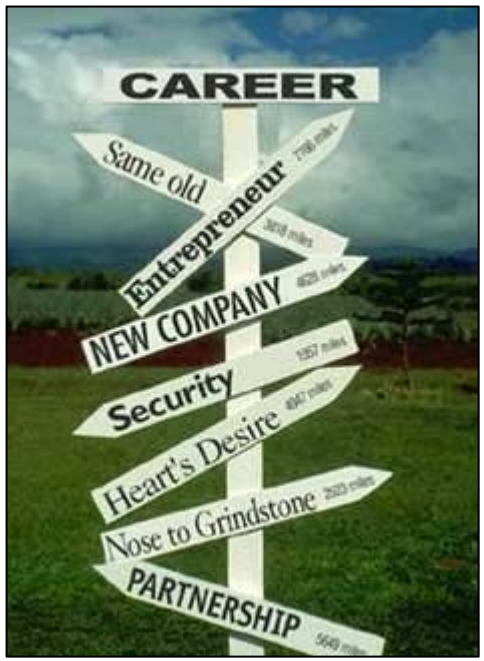
The only thing that seems stable is the overused truism that change is permanent.

What is also not in dispute is that the rate of change has accelerated and is *continuing to increase*.

Information technology is the primary accelerant in the recent increased rate of change.

The effects of the increase in the rate of change are being felt in all aspects of life: personal, careers, social structures, governments, climate.

The increase in the rate of change is without precedent in human history. *We are all pioneers.*



Why is the rate of change increasing?

First some nouns….

Definitions

- Agent
  - A person, organization, network or company that tries to predict the future, makes decisions and acts
- Market
  - An ecosystem that contains a collection of agents. Agents cooperate and compete with each other as they pursue their goals.
- Entropy
  - The amount of information (or randomness) in a system (a market, a collection of artifacts, a set of human activities). More entropy means more randomness or chaos. Less entropy means more predictability or order.
- Information
  - What the senses perceive, inputs into a decision which governs action
- Knowledge
  - A set of strategies and/or conceptualizations that facilitate the use of information and decision making

Order versus chaos

A) Pure order

- No information change
- All agents have access to the all the same information
- Information is unambiguous

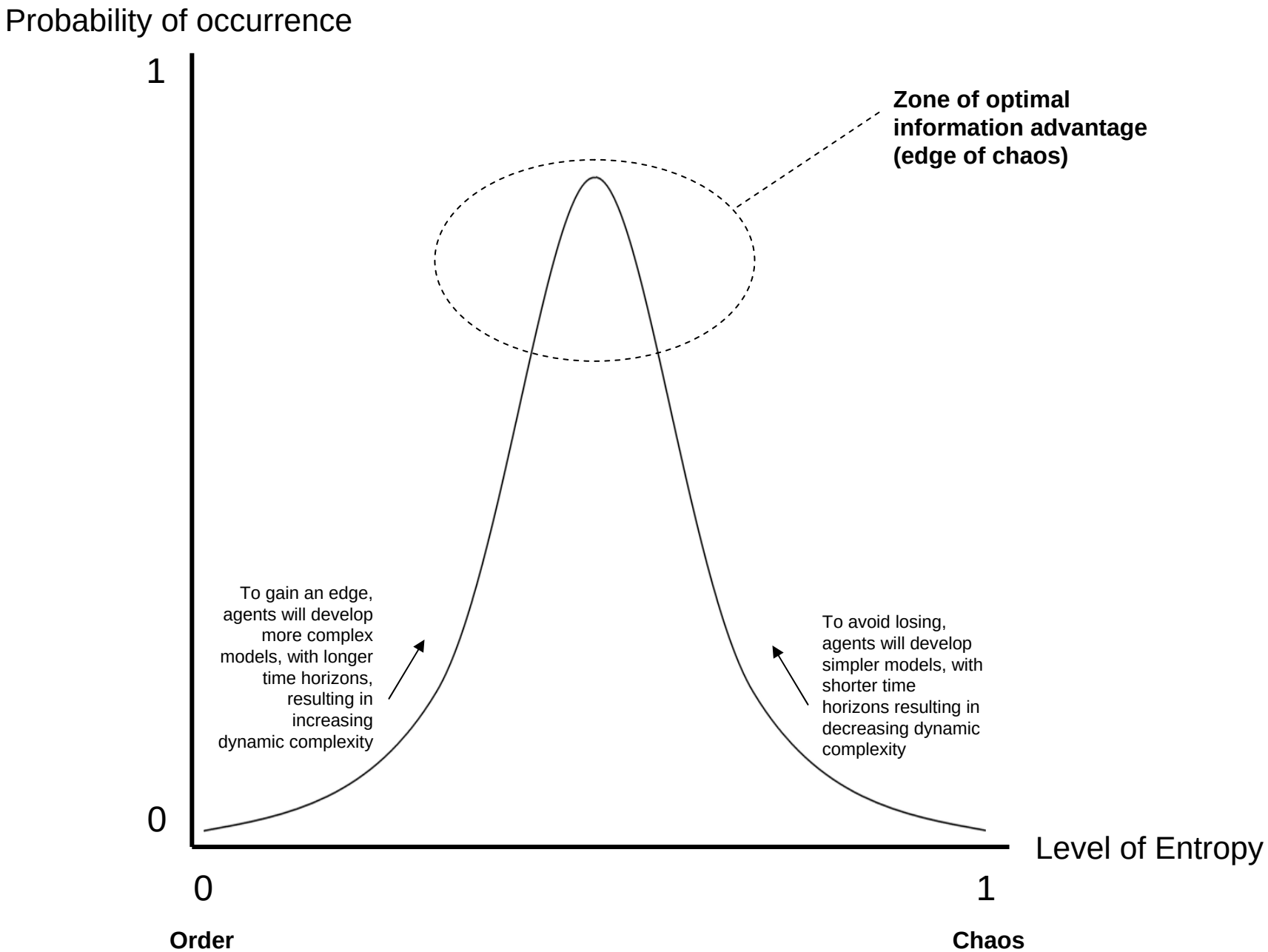
B) Pure chaos

- All information changes continuously (ceases to be information)
- No shared information between agents
- Information is ambiguous

Consider two competitors

- Consider two agents contemplating competitive action (attempting to take a bag of gold equidistant from them)
  - Details
    - Scenario A: lights on, nothing is hidden, all is clear
    - Scenario B: lights off, nothing can be seen, all is invisible
  - Outcomes
    - Can one agent outwit the other in scenario A or B?
    - In A, since no information changes and all information is immediately visible, including agent actions, no action can provide advantage, since instantly the other agent can adjust. Any added information will not provide advantage, since the competitor will see it too. Deliberate strategies will be easily seen and defended against
    - In B, since either agent has no access to any stable information, knowledge of the goal (bag of gold's location, which changes), location of the competitor and the competitor's moves is unknowable. Since both agents are blind, random action is as good as a deliberate strategy. Added information provides no advantage

A model of information advantage and change



Where does information have advantage?

- At the extremes of order and chaos, information provides no advantage
- Somewhere between those extremes, information provides advantage to agents
- Conclusions:
  - States of being that are nearly pure chaos or nearly pure order have low probabilities of existence
  - Since competition between agents always exists, ecosystems will range between the states of order and chaos, with frequent transitions along the nonlinear continuum
  - The rate of transitions is dependent on the rate of information change or flow
  - The regulation of information flow has changed dramatically

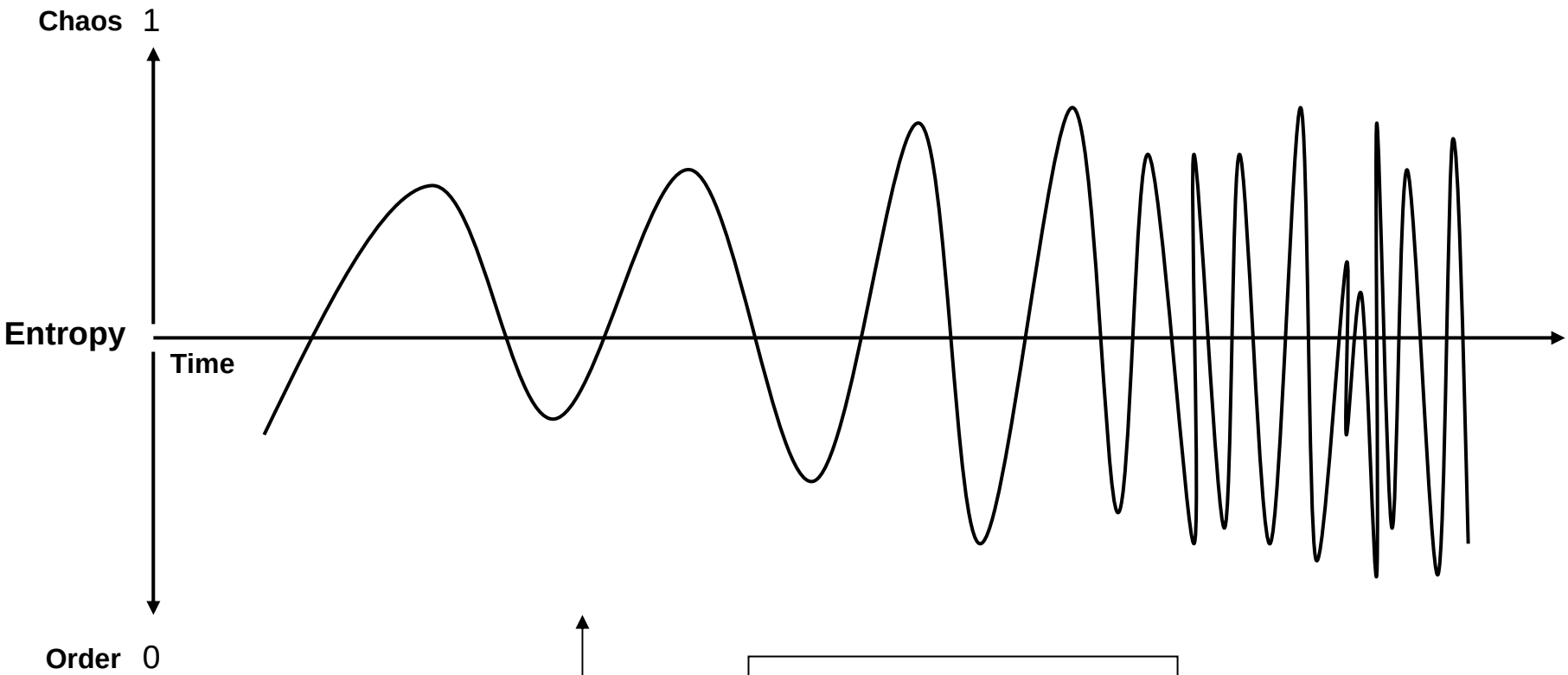
Speed of change before humans

- Agent adaptation occurs through genetic alteration
- The “information” that is flowing are specific genetic patterns that provide individuals with advantage
- The rate of information flow is dependent on the rate of change in the ecosystem. This in turn is governed by the how frequently the earth’s environment changes (very slow) and the rate by which organisms adapt to each other (co-evolution, which is slow)
- This rate falls within the range of generations and millennia
- When humans first entered the scene, humans only needed to adapt to the rate of change the earth’s environment produced and any co-evolutionary changes due to hunting or gathering

Speed of change today

- Human adaptation occurs as fast as information can be spread, understood and applied
- The rate at which new or recombined information flows is limited by this human cycle of self-creation and adaptation
  - Perhaps information uses atoms to recombine itself and find new levels of complexity!
  - This rate falls within the range of weeks, months and years
    - Diffusion of inventions (Internet versus the television versus farming)
    - Product development lifecycles
    - Birth and death of companies (YouTube took a year to get $1.6 billion in value)
- Human organizations will naturally seek faster rates of change as they attempt to outwit competitors
- Widespread availability of information (which IT is providing) ought to stabilize markets and ecosystems but…
  - Agents differ in how fast they can incorporate new information and change their models that guide their actions

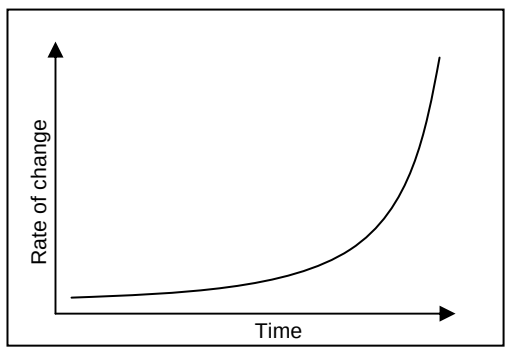
Increased rate of change



You can visualize it this way

Or

This way →

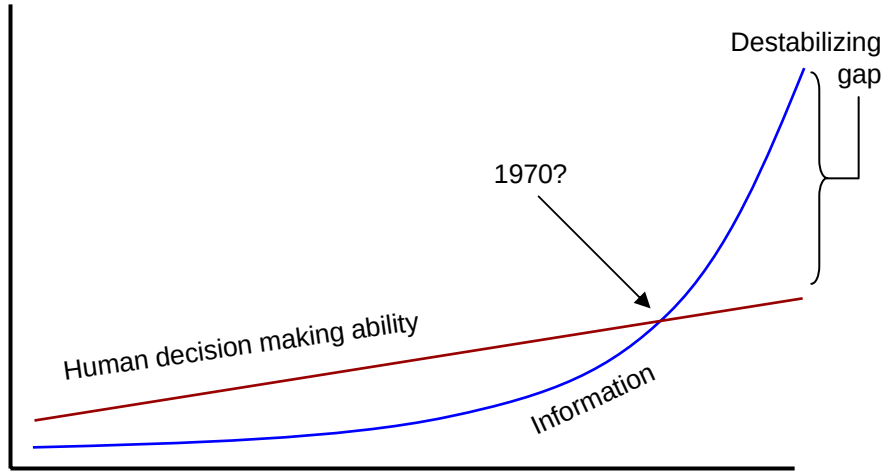


How fast can we go?

- *As fast as an agent (individual or a team) can apply information!*
- Since competitive action is performed by teams, the speed of teams matters
- Do we think that the performance of teams is as fast as they can possibly go?
- Are there competitors out there who can move faster?
- What prevents them from moving faster?
  1. Dynamic complexity in the market is making teams transient and unstable
  2. Building expert teams is slow. Group dynamics impede team and individual learning. Poor communication. Fear. Lack of learning. Lack of trust. Defensiveness
  3. Individual's ability to master new complex skills quickly or incorporate new and challenging information

The consequences for failing to catch up

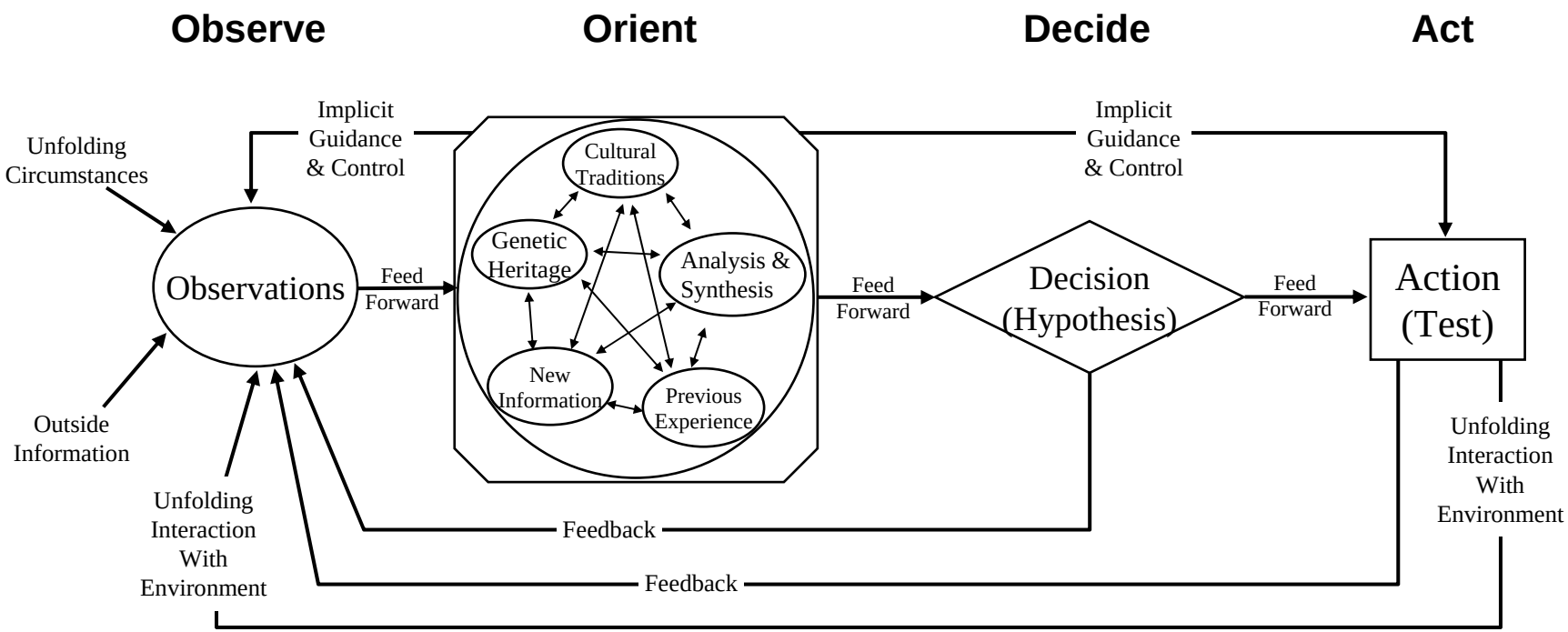
- Abundance of information without improvements in incorporating information to update models of action will result in more disparity in the breadth and quality of information actually used by agents
- This gap (a form of information ambiguity) could increase overall instability, contributing to faster transients between order and chaos
  - U.S. foreign policy?
- This gap makes available competitive opportunity, provided the balance between order and chaos remains



Making faster, nimbler teams

- Impediments to individual learning
  - Low motivation, which hampers learning
    - Motivation increases effort and frequency, which produces expertise. Casual involvement in a skilled activity is insufficient for superior expertise. Involvement must be effortful and sustained to be superior to others
  - Not enough time to develop superior skills
    - Superior skill development can take 6-15 years depending on the area
    - Life changing events, personal confusion about what and how to learn, the need to earn money versus acquire needed skills, ongoing and lengthy commitment to distant goal
- Given the increased rate of transitions in the market and the lack of knowledge of how to develop superior expertise, it is not surprising that individuals have difficulty in engaging in sustained, effortful and lengthy learning

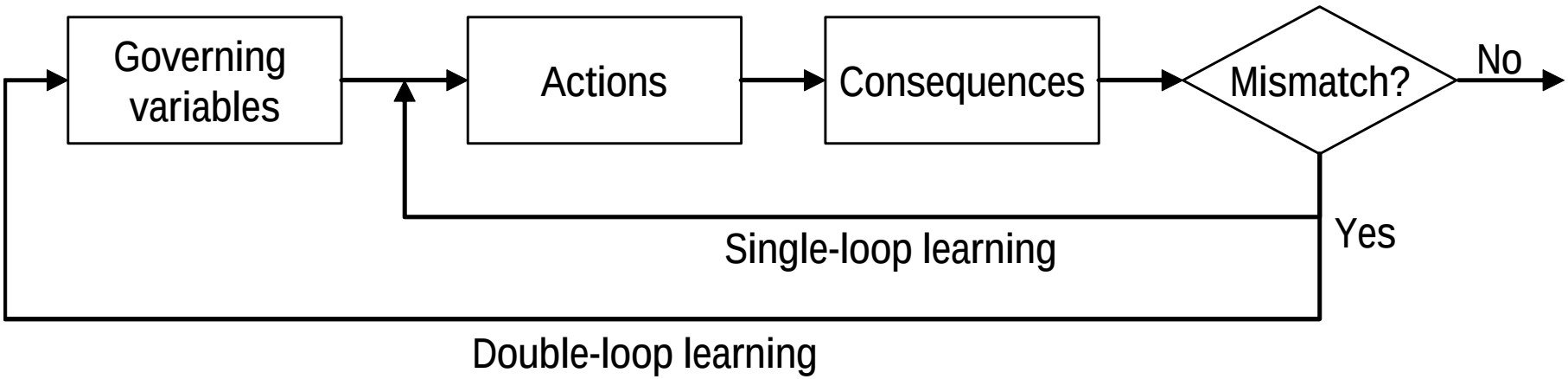
John Boyd's OODA Loop



This is one explanation for how teams and individuals incorporate information to take action. Faster OODA loops overcome competitors with slower OODA loops.

What limits the speed of OODA loops in organizations?

Chris Argyris' double-loop learning



This loop explains the difference between decision making that does not challenge basic assumptions (governing variables) which is single-loop learning and decision making that does, which is double loop learning.

What happens when people and teams fail to effectively challenge governing variables? Examples: Enron? The Challenger shuttle disaster? Abu Ghraib?

Learning requires skill development

- What allows humans to persist in effortful activity for long durations (years) in the midst of high rates of change?
  - Commitment to a highly-valued, deeply-held and stable goal
  - Physical well being and balance, avoidance of disease
  - Confidence and psychological well being
  - A significant social network that can support the individual

What is the solution?

- In order for firms and individuals to compete in the market at higher levels of performance…
  - We need to find more people who
    - Have deep commitments to lofty and enduring goals
    - Maintain their physical and psychological well-being
    - Are plugged into a strong social support network
    - And commit themselves to developing great team skills
- It is in the best interests of firms to make this happen
  - High levels of individual and team performance and expertise sustained over years is unlikely without this
  - Without many different kinds of expertise, we will not be able to manage faster transients

What kind of learning is needed?

- Specialized learning will always be needed in a complex world, but…
- Skills in how to learn and adapt will be imperative as the rate of new information and change increases. Meta cognitive skills – those that transcend a specific domain – are needed
- As ours and others basic values and assumptions come into global conflict, the need to non-defensively co-question and co-modify basic values and assumptions increases. It is through this process that firms will remain competitive and nations will avoid war. Emotional intelligence and moral/ethical reasoning skills are needed
- While each individual will need these skills, these skills are needed most in team settings, which requires strong group development skills
- Individuals and teams will need confidence in their abilities to face dynamic ambiguity. Confidence needs to be *learned*

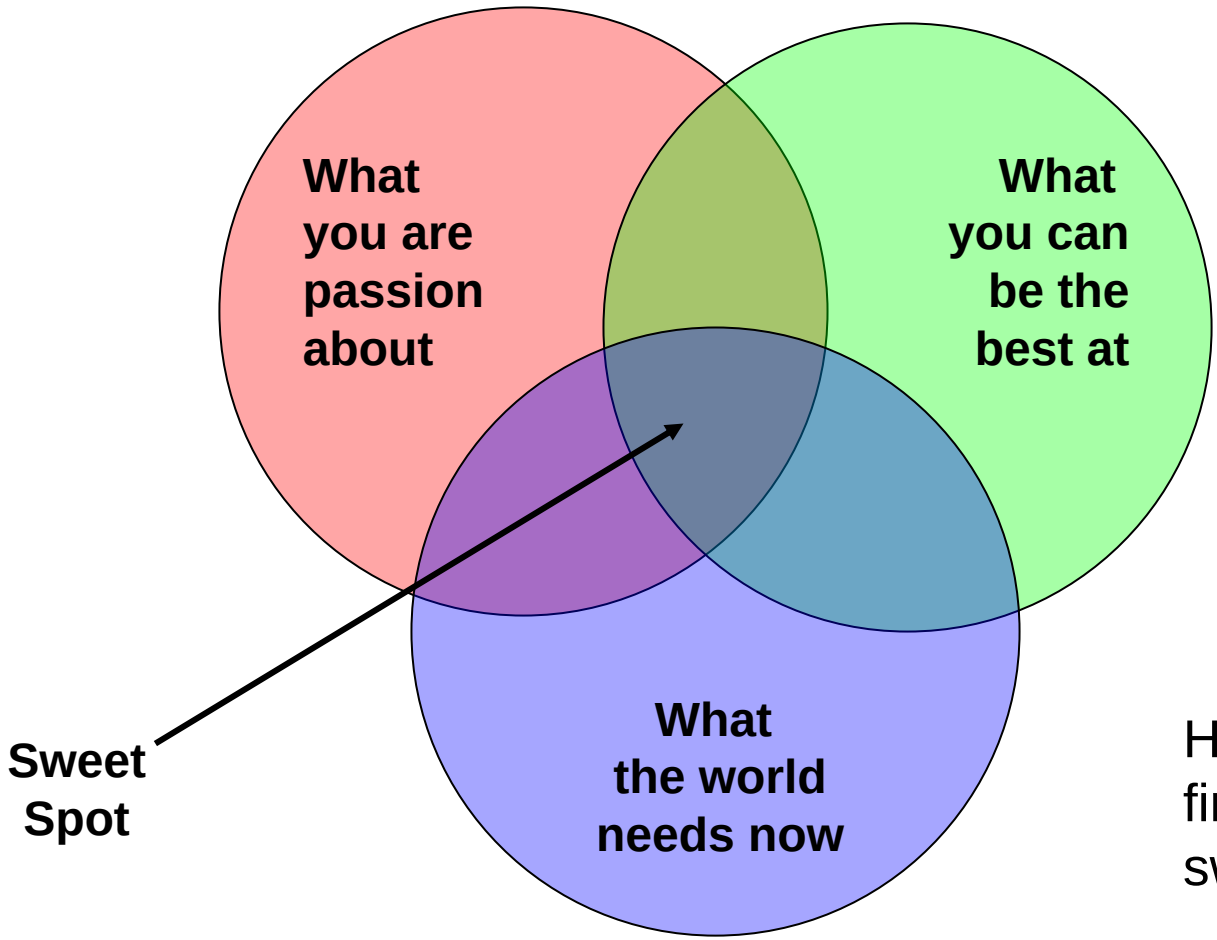
(Pause)

How can we harness the forces of faster information flow and increased rate of transients without losing our minds?

Tactics for mastering fast transients

- Reflection on why you are here on this earth
  - Developing a personal mission. Let the mission transcend the immediate present
  - Understand what you are passionate about
- Careful attention to your biology
  - Understanding the stress-rest cycle
  - Understanding the balance of forces in diet, rest, stress and genetics
- Careful attention to your inner experience
  - How to develop (unshakable) confidence
  - How to ensure your mental house is filled with the right things
    - What thoughts lead to proper actions? What actions lead to proper thoughts?
- Careful attention to your social existence
  - Individuals no longer “change the world,” knowledge required for change is too complex and requires teams
  - Who can you trust? Who can you rely on? Who can you leverage to find the right outlets for your personal mission?
  - How to develop a trusting, reliable network that mutually helps

Why are you here?



How do you find your sweet spot?

Biological issues

- Good versus bad stress
  - Stress associated with desired and joyful achievement is good
  - Stress associated with avoidance and aversion is bad
- Stress is cognitive
  - Our first reactions to events determine our initial levels of stress
  - It is difficult to change first reactions, but they can be changed, normally through continual reflection and association with positive goals
  - ‘Bad’ first responses can be tempered with quick and productive second responses. Do not let your mind fixate on anything. Rehearse a script
  - Wisdom follows when first reactions are calm and productive
- Stress isn’t always felt
  - When you find your sweet spot, events can “pull” you willingly along
  - When you are young, you sometimes may not notice the physical effects
  - Exercise, sleep and diet (water) will enable your body to easily take on and relieve stress. Pay attention to the stress-rest cycle needed for sustained high performance levels
  - Psychological ills will manifest themselves physically, sooner or later
  - Is life a sprint or a marathon?

Unshakeable Confidence

1. Avoid negativity like the plague
   - Refuse to acknowledge its existence. Associate with positive people. Flee from negative thinkers (unless you become immune)
2. Practice the basics over and over and over
   - Commit them deeply to memory. Enjoy them. Relish in small details. Practice intensely
3. Face continually increasing but incremental challenges
   - Each step should cause some nervousness and make you stretch, but should be within your grasp (let a mentor decide). Manufacture these small to medium successes daily, weekly, monthly, yearly. Repeat for 5+ years
4. Do not shirk the work
   - Use incredible effort when needed. Use superior wit and timing whenever possible. Absorb as many details and context as possible. Put yourself in situations that demand deadlines be met and meet them
5. Confront the brutal facts with level-headed, dead-on accuracy
   - Stand above yourself and examine yourself or listen carefully to others who do

Confidence: results

- Here's what happens if you follow these ideas, preferably with a mentor that can challenge you deeply
  - You begin to learn there is a short, straight line connecting thought with action with results. Results can be repeatably caused by thought. Nonconscious or "automatic" activity is a powerful source
  - You begin to learn there are few or no situations that can "unhinge" you. What was thought impossible begins to look simple
  - Things require less effort (a sign of mastery)
  - In competitive situations, superior self knowledge and situation assessment lets you better pit your strengths against the opponent's weaknesses, contributing to success and confidence
  - By iteratively and repeatedly engaging the world, you begin to trust your skills, your instincts and your ability to adjust yourself

Relationships

- Team knowledge requires more than documents. It requires social interaction that is deeper and more challenging
- Knowing how to cultivate caring and trust should result in more stable teams and development of skill not otherwise possible
- The network used for knowledge can be the same as the network used for support. Great enterprises are often built on a network of strong personal relationships
- Knowing how to build and maintain a trusting, caring and knowledge rich network is an important skill

Building expert teams takes skill and time

- Expert teams share a clear and common purpose and a strong mission
- Expert teams share mental models
  - Their members anticipate each other. That can communicate without the need for overt communication
- They are adaptive
  - They are self correcting. Their members compensate for each other. They reallocate functions. They engage in a cycle of prebrief-performance-debrief, giving feedback to each other. They establish and revise team goals. They differentiate between high and low priorities. They have mechanisms for anticipating and reviewing issues and problems of members. They periodically review and diagnose team effectiveness and team vitality
- They have clear (but not overly clear or rigid) roles and responsibilities
  - Members understand their roles and how they fit together
- They have strong team leadership
  - Led by someone with good leadership, not just technical skills. They have team members who believe the leader cares about them. They provide situation updates. They foster teamwork, coordination and cooperation. They self-correct first
- They develop a strong sense of "collective"
  - Trust, teamness and confidence are important. They manage conflict well. Members confront each other effectively. They trust each others intentions
- They optimize performance outcomes
  - They make fewer errors. They communicate often enough, ensuring members have the information to be able to contribute. They make better decisions
- The cooperate and coordinate
  - They identify team task work requirements. They ensure, through staffing and development, that the team possesses the right mix of competencies. They consciously integrate new members. They distribute and assign work thoughtfully. They examine and adjust the physical workspace to optimize communication and coordination

Conclusions

1. The rate of change will increase, and it may exceed what human culture can absorb. We can do better

2. To retain and apply knowledge, we have to master the art of change while maintaining personal stability and enduring human relationships

3. IMHO, this soft stuff is the first and final frontier of competitive advantage for firms

4. This is also the stuff dreams and well-lived lives are made of…

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