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DEVELOPING FUTURE VISIONS FOR TODAY'S CORPORATE ENVIRONMENT

The road ahead

the value of scenario planning

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Order from chaos *part two*

Zeisler Associates



In second part of this three-part series, **Steven Zeisler** and **Dyer Harris** continue their examination of Complex Adaptive Systems, and their relationship to strategic planning. Part two expands on the topic of weak signals, and provides an insight into what an enterprise can do to actively detect and act on them.



An implicit tenet of strategic planning is that the future can be envisioned to a high degree of accuracy. But any of us who have developed a five-year plan know how different reality can be from what the plan envisioned.

The reason is that virtually all social and business organisations are Complex Adaptive Systems, popularly referred to as Chaotic. At least three central characteristics of Complex Adaptive Systems (CAS) have direct bearing on strategic planning. These are:

- Complex Adaptive Systems have limited predictability. Not no predictability, just limited
- Weak signals, often hidden in the surrounding noise, are the true harbingers of what might be
- The most prolific breeding ground for innovation in CAS is an area known as 'Bounded Instability', often referred to as the 'edge of chaos'.

In a series of three articles, begun last issue, we are expanding on each of these in turn.

In this second article, we will elaborate on weak signals in the business environment – how they might appear and how an enterprise can increase its abilities to detect and incorporate weak signals into its planning and doing.

In the concluding article, to be published in the next issue, we will expand

on the third characteristic and its implications, including the desirability for an organisation to encourage an 'edge of chaos' internal environment, how to sustain it, and how to leverage it for business or organisational advantage.

The first article summarised the theoretical bases of Complex Adaptive Systems, and introduced the idea that small events, epitomised by weak signals, can cause great change. The article further demonstrated how classical planning approaches frequently contribute to an enterprise's inability to detect weak signals, and how this failure can negatively impact on the enterprise.

Two examples of demonstrably chaotic business systems were provided. In the first, a coffee products business, a longstanding competitor and a start-up acted on signals that the incumbent market share leader had missed. As a result of missing these weak signals, the incumbent enacted a cash cow strategy with the long-term view of exiting a declining market. The longstanding competitor detected more subtle signs that indicated growth in multiple market segments and enacted an investment strategy with a wider range of new offerings that led to higher profitability and market share. The start-up detected a series of weak signals that led to a redefining of the marketplace and dramatic financial success. The incumbent company saw large portions of its market disappear to competition.

WEAK SIGNAL DETECTIONSM ALONG VALUE CHAIN**Customer (and customer's customer) changes:**

- Priorities sophistication
- Preferences use of technology
- Expectations spending habits

Infrastructure shifts:

- Redistribution of power
- Shifting bottlenecks
- Profitability swings in chain
- New or deposed members

Economic shifts:

- Commoditisation
- Supply
- Raw material
- Production
- Distribution

Figure 1
Weak signal
detection
along the
value chain

In the second example, we addressed how the failure to detect weak signals in the genetically modified food industry is a significant factor that has contributed to recent and costly re-vamping of strategy and structures by at least one major participant in that industry.

Because prediction is only possible to the next innovation, enterprises must embrace the notion of business and markets as Complex Adaptive Systems, and build flexibility into their planning processes and behaviours. Paramount to this is the concept that weak signals and their detection are critical elements that need to be accounted for both in planning processes and in carrying out the plan. Without finding ways to deliberately seek out weak signals and encourage learning from them, the chances for innovation and sustainable success are slim.

Weak signals

What are weak signals? At its simplest they are what creates that creative spark, the 'Aha!'. They provide us with fresh insights. They are new perspectives, different outlooks. At their most powerful and complex, they are paradigm shatters and the vanguard of innovation.

Strong signals confirm what we know. Strong signals elicit responses from us like 'Of course', 'That's just what we expected', 'Exactly', 'No surprises there', 'See, I told you', 'That proves my point!'. Strong signals rarely give rise to innovation.

Weak signals – if they are picked up – can elicit reactions like 'Wow!', 'I didn't know that!', 'Isn't that strange?', 'I didn't expect that', 'Isn't this interesting?', 'What if...'. They cause us to

Figure 2
Weak signal
detection
beyond
served
markets

shake our heads, to open our eyes wide, and even to laugh. Weak signals are often seen as mistakes or aberrations which, if cultivated, can take on a life of their own.

In our first example described above, Nestlé, through market segmentation, detected an important signal that was disregarded by the market leader. They acted upon it to a moderate level of success. Starbucks, with sensitivity to

frequencies not on the dial of any incumbent, detected a weak signal that resulted in the most significant transformation in the coffee business since the invention of freeze-drying.

Of course, the problem is that weak signals are, by definition, weak – they are often seen as 'noise in the system'. They are weak because they are not being generated by a large enough sample. They are weak because the frameworks or paradigms we use filter them, or because the organisation's preferences and biases are much louder – in effect, no one is tuning into that frequency. The filter must be adjusted to draw attention to those signals having the potential to make a big impact.

Like the butterfly in Beijing, like the initial subtle behaviour of market innovators, like the murmurs from your organisational underground or the

faint noises your competition may be making, weak signals can portend a huge shift in the behaviour of key stakeholders, customers, competition and members of your organisation. Innovative organisations become adept at early detection of weak signals and leverage them for huge advantage. Creative leaders seize those small differences and build these into significant differentiators.

Weak Signal DetectionSM

Step one: Expand the range of detection within your business environment

In spite of the large variety of information sources available to help us understand an enterprise's environment and plan for the future, there is a strong likelihood that the ones we employ are giving us very similar data, albeit presented in different ways. If one is studying market information from expert sources in the marketplace (for instance, internal marketing reports, data from external research firm, trade publications, market trend analysis) the signals received are deep but narrow. If there is not a deliberate process to scan markets peripheral to or socially and technologically related to yours, there will be missed chances for detecting weak signals and a loss of early warning signs of opportunities and change.

If traditional ways of studying current customers is the primary source of

WEAK SIGNAL DETECTIONSM BEYOND SERVED MARKETS**Technology changes**

- What impact will Voice Recognition have on my enterprise?

Wealth distribution shifts

- How will 'women-only' web sites and networks impact my work force?

Information pattern changes

- How will social and political 'destabilisation' from freer access to information via the Internet affect my business?

Business design innovation

- What unusual combination of enterprises (for example, AOL-TimeWarner) will dramatically transform our marketplace?

Expert opinion

- Consider the opposite of what experts are saying (it was experts who said in 1950 that Charles Schultz would not be successful).

Wild cards

- What scenarios could play out as a result of Wal-Mart being chosen as a primary distribution mechanism for the new one dollar Sacagawea gold coin in the US?

insights into future direction and new solutions, the future of that enterprise is in jeopardy. Customers may know what they want today, but they rarely know what they will want in the future; no customer told companies they needed overnight delivery, personal computers, the Internet or fax machines – now we can't do business without them. By the time customers agree on what is needed and a trend 'established', it is too late for any supplier to find a competitive edge. The real problem is that the typical questions asked of customers and the traditional ways businesses interface with them are framed so that weak signals will not be elicited. This is reflective of the CAS characteristic of short-term predictability.

Traditional reporting processes are designed to identify strong signals and trends. Sales force composites, customer surveys, sales trend analysis, and sales reports identify the strong themes and patterns. If the reports contain executive summaries or are compressed into bullets in monthly presentations, the strong signals are further fortified and the weak signals completely disappear. Leadership must install mechanisms that cultivate the detection of weak signals. Reports from those closest to the market should include the

'most unusual' signal or 'market murmurs' they have detected. They are possibly the longer-range predictors.

Weak signals are rarely discerned from sales or service calls. In fact, the traditional sales process itself is intended to suppress weak signals. Think about a traditional sales force and the way it would deal with a customer who says: 'Your product would be more appealing if it had X.' Too frequently, the salesperson immediately thinks of how to overcome that objection rather than documenting it or probing further.

What subtle signals would your sales force detect if, in engaging customers, they asked questions like: 'If there was one thing you would change about the way we do business (our product, service, response), what would it be?', 'What's the most unlikely but feasible event to occur in your industry that would radically transform (improve, harm) your business?' By using creative questions that attempt to reveal the weak signals, those at the front lines will provide a new layer of information that will help knowledge officers and planners discover the deterministic process, anticipate innovations and butterflies in their system, and build in sufficient flexibility to strategies and actions. Spread your

sight and hearing wider; they are probably deep enough.

One of the world's largest hotel companies receives nearly 750,000 guest questionnaires every month, a staggering amount of data. Would they receive different feedback and signals of potentially greater value if they were also to seek feedback from the spouses of their guests? For example, might it be valuable for them to ask questions on guest feedback forms that are unrelated to the hotel room, but perhaps address the entire 'travel experience': From transportation modes used, to business and personal goals resulting from travel; from maintaining physical, spiritual and emotional health on the road, to preferences for mental stimulation and relaxation?

In addition to seeking out the weak signals of your customers, pay attention to occupants, events and murmurs in the value chain (figure 1). Saturn identified the best automobile dealers in the US and partnered with the elite ones to address a weak signal in the automobile industry. They listened along the value chain, changed the buying experience and developed a fiercely loyal, cult-like following.

Step two: Expand the range of detection outside the enterprise

The most dangerous threats to an organisation come from outside its existing business or marketplace. Desktop publishing did not emerge from the printing industry; overnight delivery empires did not arise from the existing postal service providers; the largest on-line bookseller never sold a book from a storefront. Tuning yourself and your organisation to weak signals emerging from outside your immediate domain will alert you to the surprises that can blindside entire industries, and can tip you off to opportunities for innovation and competitive advantage.

If you read *Time* and *Newsweek* and *US News and World Reports*, you are getting information generated from similar sources and comparable perspectives. The range of signals is limited, and weak signals will rarely be present. But by reading one of those plus *Wired* and *The Economist*, for instance, you will have more diverse data sets, not only from the explicit content of the articles but from the implicit signals embedded in the style of writing, lay-

WEAK SIGNAL DETECTIONSM ON THE FRINGE

Start-ups and job titles:

Make a habit of checking business start-ups or employment sections in newspapers. Recent new entrants have included Oxygen Bars, Feng Shui Consultants, Pain Management Centers, Life-balance Advisors.

Countertrends:

By the time a trend is recognised, opportunity is lost unless you look for weak signals suggesting a countertrend. Permission-in' email is the opposing trend to mass emails.

Comedy clubs:

What are the subjects and people comedians are taking on? Lenny Bruce anticipated civil rights shifts and Andy Kaufman predated the mass popularity of wrestling and chaos' television.

The arts:

Plato believed that changes in the arts predicted major political and social change. In classical music there has been a pronounced move towards tonality.

Words and mythology:

New words or new uses for words, icons, popular mythology and symbols can signal opportunities and increased activity (avatars, thrifting, theming, boys-will-be-boys, flipping, cloning farms, swish' logos).

Figure 3
Weak signal
detection on
the fringe

out and advertisements. You increase your range of sources for weak signals. To further increase the range, whether or not your business is global, read at least one foreign newspaper per week, preferably in the native language.

Pay attention to changes or slight shifts that are occurring in other businesses, in technology and in society (figure 2). In particular, look for signals that suggest new ways in which information is being accessed, gathered and disseminated. The ubiquity of cell phones and the explosive growth of Internet usage are a step change in information transfer and will tend to amplify weak signals. While the impact on businesses, governments and international relations are yet to be fully realised and remain unpredictable, a range of weak signals exist upon which contingency plans should be built.

Will the world community as envisioned but not realised by the League of Nations and the UN arise from this technology, or will the technology be used to manipulate public opinion and political outcomes throughout the world? Will anarchists make use of the technology to destabilise communities or entire nations? Each of these – and more moderate ones – are viable scenarios that need acknowledgment in certain enterprises' strategic plan. And mechanisms need to be installed in these organisations that monitor weak signals so that changing conditions can be recognised early and appropriate shifts in the plan and in the enterprise's behaviour can be made.

The recent decision by Ford Motor Company that it will offer all employees a computer and Internet access was, in part, to help the corporation exploit the Internet to the fullest. With as many as 350,000 employees online, Ford has increased the capability of everyone in the company to pick up or even generate signals about the Internet, its use, likes, dislikes, purchasing preferences and more. Next must come devices that will allow the weak signals to reach the strategic level where they can have appropriate influence on the development of plans and actions.

Interestingly, this move by Ford has imbedded within it a number of weak signals including those for competitors, other corporations, technologists, entrepreneurs, trade unions, and Ford employees. It could redefine Internet

In five years Starbucks' sales hit \$160 million and soon surpassed the profitability of larger coffee companies

Service Providers' perceptions about their marketplace; not as geographic entities but as corporate or virtual ones.

Other rich sources for Weak Signal Detection reside on the fringes (figure 3). Continuously look for opportunities to install mechanisms that increase the capability of your organisation to detect weak signals.

Step three: Add new tools to your strategic planning toolkit

We began with the assertion that businesses and social systems, like galaxies and species, are complex adaptive systems, inherently non-linear and unpredictable. This does not make scenario and strategic planning futile. Rather, we believe that the value of scenario planning is enhanced if done properly. And, we believe that strategic planning remains important provided realistic timelines for forecasted events are used.

But, all too often, the processes by which scenarios are created lack tools that disrupt the classically linear approach and paint a more alien future landscape. Extrapolating a future based on trends is not enough. A deliberate search to identify weak signals is necessary. Innovation and surprise must be accounted for – including those initiated by your enterprise. Edge of chaos thinking, to be addressed in the subsequent article, becomes critical.

And too frequently, the scenarios selected are the 'most likely', too safe or mere variations on a theme of today. The wild cards are eliminated as fantasy. So, among the scenarios dismissed as too improbable by US Army strategists in planning sessions in the early 80s were the fall of the Berlin Wall and the dissolution of the Soviet Union. Unplanned for events and implications such as these can have very dramatic – even fatal – impact on the unprepared.

Ultimately, leadership must install mechanisms and processes throughout the length and breadth of their organisation that enable weak signals to be detected and to bubble up to those in strategic positions; that allow them to be routinely monitored and checked against strategies and scenarios; and that prod the organisation towards flexibility and action. Therefore, we suggest adding these frameworks and tools to your toolkit.

- Belief that business is a Complex Adaptive System, and therefore characterised by long-term unpredictability & disproportionate amplification of seemingly small events – weak signals
- Proper definition of your timeline of predictability. It will vary with the market of interest, but it will always be shorter than you think
- Include sufficient flexibility to react – to adapt – to new events if your planning term stretches beyond the point of predictability
- Build at least some of your scenarios against the consequences of weak signal amplification
- Pick some weak signals to plan against based on the consequences, not the likelihood. While likely choices should not be neglected, scenarios based on weak signals that, if amplified, would have the 'most consequence', independent of likelihood, should be considered.

The chances are high in today's interactive world that the actual events that unfold will be akin to one of the weak signal scenarios. If you ever have constructed a five-year plan, you already knew that.

In our final article, to be published next issue, we will further explore the popular notion that one should not only accept that the world about us is a Complex Adaptive System, but should arrange our strategy to encourage and sustain an internal environment that amplifies weak signals, breeds innovation, and leverages them for business or organisational advantage.

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