2. Trajectory

{2005/07/16, DI: An example of trajectory as past (but not necessarily future) would be good}

The definition of trajectory, from the Shorter Oxford English dictionary is:

> The path of any body moving under the action of given forces, esp. one not known to be moving in a closed curve or orbit; esp. the curve described by a projectile in its flight through the air. L17.

Trajectory suggests the direction in the future, but is largely related to the past. Actions that have served us well in the past may not serve us well in the future. Human practice is largely based on prior actions. We do many things semi-consciously, because parsing logic for every action requires too much effort. Driving an automobile is a skill that becomes natural. Authoring on a computer is natural for those born in the computer age, just as writing with a pen is natural for those born in the 20th century.

{2005/07/16, DI: Here's an old unrewritten paragraph}

The management sections in libraries and bookstores are full of writings by successful business people, academics, consultants and journalists on the “secrets” of their successes, or “recipes” for approaching the decisions and/or issues in the “right way”. Is there such a thing as “truth” when it comes to understanding business?

Sidebar: Examples from the BPM discussion database

- (also in Part B): 2004/08/02 Hard systems to soft systems || math models to intangible analogies; mental models {Gary Metcalf}
    - 2004/08/03 Systems thinking vs. systems analysis; concrete systems vs. mental models {David Ing}
- 2004/09/03 World not making sense; Ackoff/Emery/Trist foundation {Gary Metcalf 2004/09/02}
- 2004/09/04 Operation Everything Virginia Postrel (2004)]
- 2004/09/04 The MBA – Some History {Economist}
- 2004/09/04 Making the Case: Professional education for the world of practice Garvin (2003)]
- 2004/09/04 But can you teach it Economist (2004)]

2.1 Our trajectory is a pattern based on collective action

{2005/07/16, DI: Heading changed, but writing underneath hasn't been}

Why do people work together in business?

In theory, we work collectively in a business to achieve something that we can not achieve independently. This assumes that we can find ways to arrange our efforts so that we can achieve a higher productivity: more output with less input. In many organizations, however, we feel as though the group has become a drag. We think that we might get better results if we spin ourselves off from that bureaucracy.

In the context of business, let's think about “truth” as our collective way forward. It's not the way that we wished our businesses to operate, but the way they really do. The ugly truth about most businesses is that they are not precision-engineered, well-lubricated machines. For every charismatic leader, there's an “empty suit” pushing paper. Some teams seem to achieve miracles, while others “lack chemistry”. As much as we try to provide every customer with the same high level of customer

service, it's human to have a bad day – both for the representative of the company, and for the customer! Businesses are human organizations.

2.2 What happens if our trajectory approaches the limits of its system?

{2005/07/16, DI: Trajectory is okay as a concept until we approach a plateau. If more energy isn't available, then we go into decline}

Sidebar: Angyal

«Systems reaching their limits. I'll leave this as a temporary placeholder, until we figure out where to put it.»

2.3 Action in the world should be frame in the context of social ecology?

« DI: On the August 24 teleconference, DLH had suggested writing something along the lines of Vickers' foreword to Emery & Trist (1972). In the absence of really knowing that means, I'll copy-and-paste that whole entry here as a sidebar, and let DLH pick the most interesting ideas from it, as well as writing around it »

Sidebar on Social Ecology (from Vickers)

> This book is described as a contribution 'towards a social ecology'. As such it is timely and welcome. The phrase is not yet familiar, the concept still imprecise; we need urgently to move toward a better understanding of it.
>
> The word 'ecology' began to become familiar outside scientific circles when human intervention in natural processes began to have effects so unforeseen, so dramatic and so disastrous as to make headline news. It might be infestation by an unfamiliar pest, like the rabbit in Australia; or soil erosion, from ill-controlled clearing and cropping; or pollution from fertilizers or industrial wastes; or urban proliferation; or toxic accumulation of pesticides. From the crescendo of such warnings, industrial man began to learn again what agricultural man learned long ago-that he is only one among many species, whose continued existence depends not only or primarily on competitive struggle but on most complex systems of mutual support, not less effective for being unconscious and unplanned. These are the kind of systems that ecologists study; so we look to ecology for light upon them. [p. vii]
>
> The ecologist has a characteristic viewpoint. He looks at the total pattern of life in some defined habitat, in the belief that it constitutes one system. When he sees populations, of one species or another, growing or dwindling, oscillating or remaining strangely constant, he assumes that the regularities which make the pattern recognizable are due to the mutual influence which each population exercises, directly or indirectly, on all the others and all of them on their common physical environment. This net of relations is what he needs to understand; and the only assumption he can safely make is that it is a net-no mere tangle of causal chains but a field in which multiple, mutual influences are constantly at work. This is the interest and this the assumption which are slowly seeping through into the consciousness of Western man, despite the resistance of a culture drunk with the apparent success of exploitation accelerating over centuries. [pp. vi-vii]
>
> The system which the ecologist studies is made up of many sub-systems, interdependent, overlapping or hierarchically organized. Each population, each group, each individual is, in varying degrees, organized as a system. As he attends first to one and then to another of these constituent sub-systems, he promotes it to the central role and turns the rest into 'environment'; but the

choice is his and he can reverse it. He may have a special interest in one or another, a concern, for example, for breeding beef cattle or breeding grasses; but in either of those cases, he will be no less interested in the effect of grass on grazing than in the effect of grazing on grass. The human ecologist has declared his interest; man is his subject. But he too will often need to shift his focus and thus change the distribution of his field between figure and ground. Indeed, he needs to do so with especial subtlety. For he finds in his field a feature which other ecologists are “largely spared. Whatever the human focus of his attention, be it individual, group, community, corporation or society, he finds that its environment is predominantly – human.

The relations of any human subject with its human surround are social or are frustrating because they are not social. Equally, the human subjects of his attention, individual or collective are social entities and would not be human if they were not. Any human ecology must be social ecology; but the name is especially apt to a study such as this, which is particularly concerned with human culture and human institutions, both as figure and as ground. A culture, whether of a whole society or of some local or professional group, may be regarded as an aspect of the living people who embody it; but it may also be regarded as the soil in which they grow. It conditions them; yet they, to no small extent, can select, reject and change the heritage which they embody and pass on. Similarly, a society's institutions can be viewed either as part of its structure or as a framework which can constrain and imprison, as well as sustain; a human artifact, which men can remake. Both views are legitimate and both are needed. [p. vii]

An ecologist must choose his field by reference to his interests and his problems. There are human-ecological problems which can only be seen with the human race as figure and the planet as ground. But most human-ecological problems call for a more restricted view. For all men's mobility and interaction, they still form relatively discrete societies. These divisions stem partly from the logistics of geography, not wholly abolished by aircraft and radio. One fifth of the world's water supply is generated in the basin of the Amazon; but this brings no relief to the ecological or the political problems associated with the waters of the Jordan. Political boundaries are equally divisive. Institutional means for distributing wealth across frontiers are radically different from those which distribute it within each political society, and far more limited. [pp. vii-viii]

The contrast should excite our surprise, not at what frontiers exclude, but at what they facilitate. The 'developed', crowded, urbanized state of today is an ecological miracle-or monstrosity-hard to credit and still harder to project into the future; a population of tens, even hundreds of millions, largely aggregated in cities, each individual dependent for his day to day existence on the activities of countless, largely unknown and indifferent strangers. It is possible only because institutions, often of immense size, have developed to structure this complexity, and only so long as culture makes these institutions work.

All these institutions, however narrowly defined their ostensible purpose, are themselves social organizations, a fact which the industrial age overlooked, to our cost even more than to its own. The authors of this book have played important parts in naturalizing the idea that a business organization is a socio-technical system, functioning as a whole only in so far as its social organization gives it inner coherence. The two requirements do not easily combine, for they involve conflicts of scale. Technological and economic factors promote growth to a size which social organization finds repugnant. [p. viii]

The same conflict besets the organization of those *socio-physical* systems we call cities. How to organize such a system on a scale large enough to deal with the activities that it generates-with its traffic flows, its flows of goods and services, its flow of information-and yet keep it, socially, to a human scale? The human ecologist is daily reminded that, through all but the last 2 per cent. of human history, men were accustomed to live in societies not larger than groups of families, and that this was probably true also for their pre-human ancestors through far greater gulfs of time.

> The whole agricultural epoch is contained within ten millenia, a mere 300 generations; and only from the middle of that epoch, in a few favoured areas, did wealth accumulate sufficiently to support the concentrations and to breed the problems of urban man. [pp. viii-ix]
>
> Today, as the industrial age approaches what the authors regard as its close, these conflicts of scale have risen to it critical level. On the one hand, economic organization grows uncontrollably larger. On the other hand, an even fiercer demand arises for stable social organization on a scale small enough to be satisfying, meaningful and viable; a demand expressed by newly self-conscious groups, using with a new violence the new methods of coercion offered by societies whose stability is vulnerable as never before. These conflicts of scale are ever present to the social ecologist.
>
> He is equally conscious of conflicts of scale in another dimension; for the ecologist, more than most, is conscious of the dimension of time. His concern is with events extended in time, and with processes of mutual influence which take time to accomplish. And wherever he fixes his attention on the human scene, he becomes aware of conflict between the fastest rate at which men and societies can be expected to change their responses to or even their understanding of their changing milieu, and the slowest rate at which that milieu can. be expected to change. Human generations change no more quickly than before; indeed, with increased longevity, they may be said to change more slowly. But the changes which they unwittingly breed in their surround accelerate exponentially.
>
> These papers should help to establish a way of thinking which is urgently needed and still far from general. Though the word 'system' is in constant use, its meaning is often restricted and its human implications still far from accepted. These include the acceptance of limitation; of mutual obligation; and of a sense of time which extends the present deep into the future as the concern of men now. And all this is implied as the inescapable consequence of the net of relations which alone can sustain our present societies, preserve our heritage and give our aspirations any hope of realization. [p. ix]
>
> [Source: Sir Geoffrey Vickers, “Foreword”, *Towards a Social Ecology*, Plenum Publishing, 1972.]

« More DLH content here »

2.4 Trajectory is based not only on the deliberate, but also the emergent

« I'd like to condense these ideas, but for now, I'll just copy-and-paste stuff from Henry Mintzberg, Bruce W. Ahlstrand and Joseph Lampel, *Strategy Safari: A Guided Tour through the Wilds of Strategic Management*, Free Press, 1998.»

Sidebar on Strategy (from Mintzberg)

> – begin copy-and-paste –
>
> It turns out that strategy is one of those words that we inevitably defined in one way yet often used in another. *Strategy is a pattern.* that is, consistency in behavior over time. A company that perpetually markets the most expensive projects in its industry pursues what is commonly called a high-end strategy, just as a person who always accepts the most challenging of jobs may be described as pursuing a high-risk strategy. Figure 1-1 contrasts strategy as plan – looking ahead, with strategy has pattern – looking at past behavior.
>
> Now, both definitions appear to be valid: organizations develop plans for their future and they also evolve patterns out of their past. We can call one *intended* strategy and the other *realized* strategy. The most in important question thus becomes: must realized strategies always have been intended? (That intended strategies are not always realized is all too evident in practice.)

> There is a simple way to find out. Just ask those people who happily describe their (realized) strategies over the past five years what their intended strategies were five years earlier. Were they the same? A few may claim that their intentions were realized perfectly. Suspect their honesty. A few others may answer that what they realized as strategies had nothing to do with what they intended. Suspect their behavior. In our experience, the vast majority of people give an answer that falls between these two extremes – a bit of this and a bit of that, they say. They did not stray completely from their intentions, but neither did they achieve them perfectly. For, after all, perfect realization implies perfect foresight, not to mention an unwillingness to adapt to unexpected events, while no realization at all suggests a certain mindlessness. The real world inevitably involves some thinking ahead as well as some adaptation en route.
>
> As shown in figure 1-2, intentions that are fully realized can be called *deliberate* strategies. Those that are not realized at all can be called *unrealized* strategies. The planning school, for example, recognizes both, with an obvious preference for the former. But there is a third case, which we call *emergent* strategy – where a pattern realized was not expressly intended. Actions were taken, one by one, which converged over time to some sort of consistency or pattern. For example, rather than pursuing a strategy (read plan) of diversification, a company simply makes diversification decisions one at a time, in effect testing the market. First it buys an urban hotel, and a resort hotel, then another urban hotel with a restaurant, then a third of these, and so on, until a strategy (pattern) of diversifying into urban hotels with restaurants has emerged.

> Figure 1-2 Strategies Deliberate and Emergent

> As implied earlier, few, if any, strategies are purely deliberate, just as few are purely emergent. One means no learning, the other means no control. All real-world strategies need to mix these in some way: to exercise control while fostering learning. Strategies, in other words, have to *form* as well as be *formulated.* An *umbrella* strategy, for example, means that the broad outlines are deliberate (such as to move upmarket), while the details are to emerge en route (when, where and how). Thus, emergent strategies are not necessarily bad and deliberates strategies good; effective strategies mix these in ways that reflect the conditions at hand, notably the ability to predict as well as need to react to unexpected events. [pp. 9-12]
>
> – end copy-and-paste of Mintzberg et. al –

2.5 Collective action may not be entirely authentic, and may include deceit

In common language, the collective direction that we take is usually called business strategy. The idea of strategy, from its military heritage is slightly problematic. From the Clausewitz's definitions, there is a distinction between strategy, which involves deception, and stratagems, which do not. An effective competitive strategy, if it is well-cloaked, may mean that only the leader really understands the true purpose of any allocation of resources. Warriors sent to engage the enemy in a diversion must be sufficiently convincing so that flanking division can attack from an unexpected position and crush the enemy.

Sidebar on Clausewitz

> More information on Clausewitz is available from David Hawk’s course described froma digest of David Hawk's lecture at Salo .

In this view of strategy as intent, the end justifies the means. The appropriateness of ends and means in business, and in war, is often suspect. If the reader wants a simple description about what this book

is about, it's about business strategy. There is, however, nothing simple about business.

2.9 "Best", "both" and "more" are conceptions, and may or may not be active choices

In the view of strategies as both deliberate and emergent, a business, in its parts or whole, may be describing as pursuing a “best”, “both” or “more” orientation. There's no inherently right or wrong approach. The considerations may be expressed in multiple dimensions. « This is leading to an introduction of the next three sections, 2.2, 2.3 and 2.4 »

« DI: At this point, there's two ways that the writing could go.

- 2.1 as “Best”; 2.2 as “Both”; and 2.3 as “More”; or
- 2.1 as “Why(s) and how(s)”; 2.2 as “Where and when”; and 2.3 as “Who and with”

I originally thought about this as the second way first, so I'll leave it this way, initially »

« DI: A smooth transition to the next section needs to be written »

<< Examples to be incorporated >>

- The counter-logic of “downloading costs”, e.g. administrative costs reallocated to more profit units – resulting in a lot of long-term investment
- Paying for previously packaged services (e.g. food on airlines)
- Cities bearing costs previously funded regionally or nationally (e.g. closing down the pool at the Bowmore combined school and community centre)
- Homogenization of radio playlists, high costs of buying CDs, low royalties paid to musicians, and Napster downloading.
- Roads and traffic (including the dissipation of traffic on the San Fran embarcadero).
- What did Adam Smith really say?