

Chapter 1: Discovering Strategy

From *Organizational Evolution by Design*

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"I may be wrong, but at least I am not confused."

Jeff Miller, former CEO of Documentum, repeats this point whenever he has a chance. He strikes a chord. A leader, above all, must point the way. Better to be pointed the wrong way than to be left aimless. After all, clearly going the wrong way, your error will eventually become evident. Aimlessness is probably wrong too, but is harder to correct. If leadership is anything, it is about pointing the way.

But pointing the way is difficult. Organizations face conflicting demands: marketing reports on a new competitor with a dramatically different product; R&D has created a breakthrough technology, but it is behind schedule and needs more funding; legal compliance is at odds with the company's China country head, whose "entrepreneurial" actions are ramping up sales there. Leadership can seem so simple when portrayed as pointing to the top of a hill. In practice, leadership is about deciding amid sharply conflicting priorities. For that you need a strategy.

"Barnett says you need a strategy." Obvious. But you would be surprised at how many organizations I see that do not have direction. The problem? Let's call it strategy neglect. Meaningful strategy gives direction; you know you suffer from strategy neglect when people in your organization don't know how to resolve conflicting priorities. I'm not

talking grand mission statements about changing the world, nor lengthy strategic plans packed with detail. I'm talking about strategy: *the logic that explains why an organization might succeed*.

And to be useful, your strategy's logic must be specific enough to guide action. This means that a useful strategy includes a working definition of the company's goals, what it does, and how it does it - a logic that a rank-and-file employee can put into action. Maybe I finish my project a day late because our strategy is about completing work to perfection. Or maybe I cut some corners to be on time because we're about time-to-market. Whatever the strategy, it needs to be alive in the day-to-day actions of employees. Otherwise, as in so many companies, we are left confused.

Great Strategies are Discovered, Not Planned

Heard at an outdoor café along University Avenue in Palo Alto: "The strategy was clear. You can't start as a platform. You start as an application and then, when the user base is large enough to get a network effect, you can pivot into a platform." Knowing nods around the table; wisdom understood by the cognoscenti.

I was hunkered down with a Super Tuscan at the last sidewalk table, eavesdropping on the ideas circulating among the start-up crowd. This one is a lesson from my course at Stanford. Not to imply that I'm the headwaters. To the contrary, I've waded into a stream of ideas cascading around the valley, ideas that change with each new, unexpected development. Even the subject of the discussion I overheard, Facebook's platform strategy, was discovered along the way. Originally, Facebook's leaders saw the company as a social network application. Only once Facebook grew

large did the idea materialize to become a platform. So in 2007 the website's APIs were opened to a world of developers who could independently create Facebook applications. Since then, a litany of reversals and changes have fueled debate among developers and users, as Facebook has tried to exert control over the platform. Some have criticized Facebook for this haphazard evolution. Turns out, that is how most strategies emerge: Discovery beats planning.

For more evidence, go back and look at the strategic plan from years ago at your favorite successful company. There is a good chance that the company's winning strategy won't appear in that old plan. Examples abound: Trader Joe's, a boutique specialty retailer in the U.S., once made its money selling cigarettes and ammunition – a far cry from the microwavable organic meals and fancy cheeses one can get there today. Honda Motors, famously, planned to sell big motorcycles – “choppers” – in the U.S., and ended up discovering the market for small “minibikes.” The list of examples goes on, including both established companies and entrepreneurial firms.

So how do we deal with the fact that discovery beats planning?

One common reaction is to pretend that the success was planned. Of course, after a discovery we naturally try to make sense of what we see working so well. And there is nothing wrong with retrospective rationalization; making sense of what happens is a natural human reaction. We do it all the time in business school “case studies” in an effort to learn; we do it so much that you can think of business schools as retrospective rationalization boot camps. The problem arises when we forget that the rationalization came retrospectively, leading us to falsely believe that we saw it coming - as in the young folks talking about Facebook (“The strategy was clear...”). Such a

misunderstanding leads observers to think (wrongly) that great businesses result from great plans.

Retrospective rationalization wins the day within organizations, too, as over time many leaders exaggerate the role of planning in their own successes. Take, for instance, Intel's move into microprocessors. You may be surprised to find that this company was not always a microprocessor producer. Intel made other things, like dynamic random access memory, but the numbers were showing that their small microprocessor business was taking off. Since Intel's budgets were set up to follow such trends, the company shifted toward this new market opportunity; explosive growth followed and soon Intel re-defined itself as a microprocessor firm. Perhaps most surprisingly, Intel's leadership only recognized the organization's change in strategy after it had taken place.¹ Like so many firms, Intel became great through a process of discovery.

Another bad reaction to discovery is to wax cynical, surmising that success really just comes down to luck. This conclusion denies the fact that some organizations are better than others at spotting the opportunities that (luckily) come along. There is much more to discovery than the flip of a coin. When plans produce unanticipated consequences, these often look like failures. If you think that leadership means waiting to get lucky, you'll conclude from such failure that your luck has run out – a self-fulfilling prophecy.

A better reaction is to lead your organization through the process of discovery. Your strategic plan initiates, and then updates, your logic drawing on the discovery

¹ Burgelman, Robert A. 1994. "Fading Memories: A Process Theory of Strategic Business Exit in Dynamic Environments." *Administrative Science Quarterly*, 39: 24-56.

process. This updating happens differently at different companies - and often happens unintentionally. But research on how companies evolve has revealed two key steps in the discovery process.

Step 1: Unexpected Results

Of course, you not only want your strategy to be logical, but you want your logic to be sound. Logics can be wrong when they are based on assumptions that turn out to be wrong.² In such cases, we experience unexpected results during execution. Scott Cook, Intuit's founder, coaches his people to "savor surprises" – to see deviations from plan as the fountainhead of opportunity. After all, there is information in those unexpected results for those who know to seek it out. Surprises in execution - good or bad - should cause us to question, and then update, the underlying assumptions behind our strategy. This kind of strategic development is sometimes called "emergence."

Since winning strategies need to be based on correct assumptions, all strategies are a work in progress - because the world keeps changing. Moreover, companies are also learning every day about what they are capable of, in much the same way that a person learns about her strengths by trial and error. This is why many of the world's greatest organizations discovered their strategies, winning for reasons they did not understand initially.

Take, for instance, the Chinese fintech powerhouse Alipay. As of 2021 it has over a billion users, continues to grow, and is extremely profitable. Yet the service was created originally back in 2004 to help the then-new Taobao C-to-C ecommerce

² For a systematic guide to analyzing and improving the logic of strategy, see Sørensen, Jesper and Glenn R. Carroll. 2021. *Making Great Strategy: Arguing for Organizational Advantage*. New York: Columbia Business School Press.

platform compete with eBay in China. Neither Taobao nor Alipay was initially intended to make money. Rather, they were meant to deter eBay from becoming a competitor to Alibaba (the company's first success, a B-to-B platform). Yet by banking the unbanked, and enabling those without other credit options to enter the ecommerce world, Alipay discovered an entirely new and hugely profitable strategy. Today, leadership at Alipay ("Ant Financial" as of 2021) is entirely clear on their strategy - even though the logic of that strategy emerged through experience.

Not all unexpected results are so happy, but even failures can trigger the discovery of a great strategy. This fact surprises many, but think it through. When execution of a strategy goes smoothly, we simply enjoy the success. It often requires failure for companies and their leaders to stop and reconsider their strategy. For example, in 2021 NetApp is known as a well-established player in the data services space, pulling in revenue in the billions of dollars annually and running complex hybrid cloud services for the world's largest companies. But when it started in the 1990s, the company's strategy targeted small firms with simple low-cost file servers. This strategy was based on the assumption that only small firms, because they lack IT infrastructure, would value the simplicity of NetApp file servers. That strategy failed, but in the process leadership noticed that large companies loved their file servers – because of the (unexpected) dramatic increase in data speed these servers offered. Taking advantage of this discovery, the company then targeted large firms – as Tom Mendoza and his team built out a direct sales force and an organization to support it. In this way, we often see winning strategies emerge in response to failure, as we revise the assumptions on which they are based.

Because strategies emerge from experience, rather than think in terms of "strategy execution," many prefer instead to describe the strategy process as a hypothesis test. This approach draws from the ideas of Professor James March, who conceived of organizations as "learning" - albeit in an incomplete and messy way much like humans do.³ Seen this way, a company's strategy is a theory - one that develops iteratively over time as depicted in Figure 1. Our strategy guides and coordinates, but in the process its underlying logic is tested and then updated.

Figure 1.1: How Strategy Develops



Note that strategies often adapt through this process whether or not the leadership of an organization thinks of the process as a hypothesis test. For instance Siemens, the German technology giant, initially failed when it attempted to enter China with its medical diagnostic imaging machines and chose to exit that market. Over time, however, the company noticed that its remaining inventory of machines in China had been refitted with functionality better suited for that country's health care markets and institutions. Informed by that insight, the company re-entered China with an updated

³ March, James G. 1991. "Exploration and Exploitation in Organizational Learning." *Organization Science*, 1: 71-81.

strategy, and consequently was met with great success the second time around. More generally, whenever a company attempts to do something based on a novel logic, from new business launches to internationalization, unexpected results - especially an initial failure - can trigger the process of strategic discovery.

Step 2: Diagnosis and Learning

But learning from experience is difficult. Such learning requires considerable effort by leadership to correctly diagnose, to interpret and make sense of what has happened. The problem is that our experiences are often a poor teacher because they are so limited. We may have experienced an exception rather than a rule, or we may have experienced a consequence that was actually produced by other factors that we have not considered. If we were collecting a large and unbiased sample, we could use statistical inference techniques to guard against being misled. But when we are executing strategy, the sampling criteria are haphazard and the sample size is of course very limited - really just a "fragment of history."⁴ Consequently learning during the emergence of strategy can easily lead us to draw incorrect conclusions.

To illustrate, consider the example of music subscription. After the music sharing service Napster was declared illegal and shut down in 2001, the brand was reborn in 2003 as a (legal) paid subscription online-music service run by Roxio's Chris Gorog. Chris and his team quickly amassed a large catalog of songs, enabled radio streaming, established partnerships with online platforms like yahoo (which was big and successful then), built an entrepreneurial organization, and expanded internationally. As record

⁴ James G. March, James G., Lee S. Sproull, and Michal Tamuz. 1991. "Learning from Samples of One or Fewer." *Organization Science*, 2: 1-13.

stores became history, Apple's iTunes, illegal music downloads, and a few subscription services like Gorog's reinvented Napster offered different visions of the future. But by 2005 the verdict was in. Illegal downloads continued apace, iTunes was a clear success, and subscription services were a failure. As one Washington Post writer put it (in 2005), Napster's subscription model was not a viable alternative to music ownership: "When music is good, you want to know that it can't be taken away from you."⁵ The final nail was Steve Jobs' declaration: "Nobody wants to rent their music."⁶ The experiment had been run, and the music ownership model beat subscription services.

But wait. As of 2021, with the clear success of services like Spotify and Apple Music, the pundits are now saying that subscription models are the winning logic in that business. What about the lesson we learned from the failures of just a few years ago?

The problem here is that a failure is a datum, not a logical argument. Data do not speak for themselves. Failures can have various causes, and so it takes logical reasoning to explain why failures happen. Perhaps the early subscription services were ahead of their time, such that limited bandwidth might have made them less attractive than they are today. Or maybe the smartphone is a necessary complement to such services. Whatever the diagnosis, logic is required to sort out why strategies succeed and fail.

Unfortunately, most observers skip the logic part. It is mentally easier to jump to the "obvious" conclusion: If the business failed, the business model must be wrong. Full stop. You can easily tell when this skip happens. The person will name an example as if it were a reason. Is online grocery delivery a viable model? No: Webvan. Is internet

⁵ Pegoraro, Rob. 2005. "Math Is Done: Napster to Go Doesn't Add Up," *Washington Post*, February 13.

⁶ Apple, Inc. announcement.

search a viable business? No: Alta Vista. These examples are data, not logical reasoning. But it is hard to rebut those who argue by citing examples, because you look the fool trying to say that a failure somehow might have made sense. We replace reasoning with dueling examples: I shout “Napster!” you reply “Spotify!”

The result? We too often “learn” without logic. Combine this with the incomplete and misleading results we gain from experience, and we often walk away from great ideas. The Apple Newton failed, leading many to say that there was no market for smart handheld devices - yet now we all own them. Early attempts at remote alarm systems failed, leading many to conclude that such services could not be profitable; now they are commonplace. Even internet search, possibly the most lucrative business in history, was initially panned after a spate of failures among early movers – Lycos, Alta Vista, Excite, and others. Often firms fail. But that may not mean, logically, that we should abandon their strategies entirely.

To diagnose well, we need to use logical reasoning and then test our thinking by systematically contrasting failures and successes - as is done in good academic research. Popular techniques such as A/B testing, agile development, root-cause analysis and similar approaches are designed to systematize learning from failure. These techniques routinely are used in well-managed firms these days, and have made their way into the global business lexicon. When sufficient data are available, such techniques can be very effective for learning. But often they are deployed only within product development, manufacturing, or logistics rather than being used at the level of the organization and its strategy. And when these techniques are used to evaluate an organization’s strategy, that process often leads to error because of insufficient data.

The insufficient data problem plagues strategy diagnosis in both entrepreneurial start-ups and established businesses, and has led to the unfortunate popularity of the “pivot.”

Persist or Pivot?

The music subscription example highlights a problem in organizational learning known as the “false negative.” The possibility of false results needs to be understood if you are to successfully lead strategy. No doubt you've heard insanity defined as “doing the same thing over and over and expecting different results.” And yet we know from science that advances often come when experiments fail to replicate a result. Einstein himself, said to be the insanity aphorism's author, often repeated experiments. After all, experiments sometimes produce false results. You don't have to be Einstein to know it is a good idea to run the test again.

Yet in your organization, you probably live by the insanity aphorism - insisting that no action be repeated if it did not succeed. How often have you said “But we already tried that, and look how it turned out!” Calling others insane is an effective way to shut down further experimentation (and thinking).

Fortunately for us all, the world reruns experiments all the time, and often gets different results. Webvan failed. Now Amazon, Google, and others are delivering to your door. EachNet (and its acquirer, eBay) failed to make cash-on-delivery work in Chinese C-to-C e-commerce. Now Taobao's cash-on-delivery system is thriving. The failures of Alta Vista, Excite, Lycos, and others led many to conclude that internet search could not be a business. Now, well, you know.

You're probably already trying to explain the differences in all these examples. Slow down; the broader issue here is the problem of false results.

Sometimes experiments generate false negatives - they tell you "no" when the real answer is "yes." And sometimes experiments generate false positives, telling you "yes" when the real answer is "no." You of course know about false positives and false negatives in medicine. We worry about them a lot, which is why we often go back for a retest when things get medically serious. But we don't consider the possibility of false results nearly enough in our organizations.

For instance, I recall one of the early movers in digital medical diagnostic imaging in the U.S.. This start-up's system was rapidly adopted by several hospitals, leading to a lot of excitement, including executives quitting their jobs and joining the company. GE even looked into a lucrative buyout. Then growth abruptly ended: The early wins were a false positive. The founders of the company had been connected to a set of veterans hospitals that faced a mandate to digitize. Once those hospitals had adopted, growth stopped dead. The initial positive results had been mistakenly interpreted as evidence that the strategy's logic was sound, and that the business would scale.

False negatives are common too - as in the examples of music subscription, search, delivery, and Chinese COD - but they are often harder to spot. The problem is that false positives are self-correcting, but false negatives are not. When you get a positive result from an organizational experiment, typically you'll keep at it. If it turns out to have been a false result, the world will make that clear enough. But if you get a false

negative, you'll be inclined to "pivot." And you'll never know that you were on to something good - unless somebody else tries it again.⁷

For this reason, the pivot has become all the rage among young business executives. Hang out sometime at the cafeteria of the Stanford Business School and listen for the number of times you hear the word "pivot." The word is said too offhandedly, and with great effect – evidenced by the ripple of nods among listeners: "This person knows the way." It is used to describe a change in strategic direction during the discovery process, often following some instructive missteps, culminating in a massive success. The term has become standard jargon in the startup world since the explosive popularity of books on entrepreneurship by Eric Ries and Steve Blank.⁸ They lay out a step-by-step approach to learning when releasing a new product: Starting with a "minimum viable product," using it to fail fast and cheap in a test of the "value hypothesis," and then adapting to the market's response (the "pivot").

The problem here is not the pivot, but the belief that the pivot is key to creating "radically successful products that win." Stories of success after a pivot circulate in our business schools like tales of clutch hits around a sports bar. To hear them, you would think we were all batting 1000. It seems we forget the pivots gone awry. And since our collective memory selectively retains the success stories, the pivot seems like a sure bet. To aspiring business school students, how seductive to think that there is a sure road to success – if only we keep our eyes open and remember to pivot.

⁷ Denrell, Jerker and James G. March. 2001. "Adaptation as Information Restriction: The Hot Stove Effect." *Organization Science*, 12: 523-538.

⁸ Ries, Eric. 2011. *The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses*. New York: Crown. Blank, Steve. 2013. *The Four Steps to the Epiphany: Successful Strategies for Products that Win*. Palo Alto: K&S Ranch.

It turns out that if you look at all the evidence, failures and successes alike, the picture is very different. The bottom line of the research is that pivots work smoothly only when incremental change brings positive returns. Then we see gradual shifts, with each small step along the way yielding encouraging results. But only some journeys entail a smooth upward path. For many changes, especially the disruptive ones, pivoting makes things worse before they get better (if they get better). This pattern is sometimes called the “J curve” in popular management circles. But the “J” shape is not inevitable, since a straight-down drop into failure is also possible.

Take, for example, Hewlett Packard’s (HP’s) move into digital communications systems in the early 1990s. With network technologies taking off globally, the world’s big tech companies were vying to be the center of new systems for digital transmission. HP made its move in this space by transforming its old microwave division to be its digital communications business. The company assembled a team under Jim Olson, who ran the division like a startup. Informal hall-talk pushed aside scheduled meetings and formal reports, and HP’s flat, engineering culture accelerated the division’s innovativeness. The technical results were encouraging: a new broadband server, a broadcast server, and other technologies that would allow for such futuristic functions as video on demand – just as soon as the networks of the world would allow.

And therein was the problem. Technology advances alone are not a business, and the company’s visionary pivot into the digital communications age far outpaced the ability of the world’s networks to use these technologies. Now, with 20/20 hindsight, we of course know that these developments would turn out to be worthwhile. But Jim Olson had to go to annual budget planning meetings without the benefit of hindsight, where his

anemic returns were literally invisible when graphed next to those of, say, the company's exploding printer division. Year after year, Olson evangelized his vision of a digital future, but the numbers told a different story.

The lesson: Big changes, the breakthroughs that transform industries, make things worse before they make things better. In hindsight, we dismiss those troubles as "short run". But when you are living through them, when you are leading a team charged with getting to success, you face what seems to be an unsolvable problem. Research shows that firms commonly fail to make these transitions.⁹ These are not fast, cheap failures, but disastrous ones that render cynical those who put their faith in the promise of a smooth pivot. To lead others through change requires persisting with a steadfast vision, one that holds even after the cynics have moved on in search of an easy pivot. Only the logic of strategy can serve as your guide during such transitions, since just looking at short-term results will not be encouraging.

Planning as Sensemaking

If strategies emerge from experience, then what about planning? After all, if you say "strategy" to most people, they will think of the annual "strategic planning" (budget-and-goal) process at their place of work. Even though strategies emerge from experience, we must of course plan because we must create budgets and goals to guide action over the year to come. But that budget-and-goal process, in and of itself, is not strategy, since such planning can and often does take place without any guiding logic.

⁹ Barnett, William P. and Glenn R. Carroll. 1995. "Modeling Internal Organizational Change." *Annual Review of Sociology*: 21: 217-236.

The best example of planning without a guiding logic is historical: The Soviet Union. Business school professors miss the Soviet Union. The nemesis of old used to provide us with a stream of cautionary tales.

Take nails, for instance. Socialist economist Alec Nove wrote of this example¹⁰: In an effort to increase the production of nails, the Soviet planning authorities created production incentives based on numbers of nails produced. In response, the Soviets enjoyed the following year a plentiful supply of many very small nails.

To correct the problem, the authorities cleverly switched to incentives based on weight, and the producers responded by manufacturing very large nails. The travesty was parodied at the time in the satirical magazine *Krokodil*. Ah yes, better to use the market. But the real lesson of the Soviet experiment is about planning: Unless it is guided by a strategic logic, planning doesn't work.

Organizations must and do plan, of course. Their leaders often call these plans "strategic" to give them gravitas. But typically strategic plans are just budgets and goals. Budgets and goals are important, but they are not "strategy" if by strategy we mean the logic that drives action.

For planning to be strategic, it needs to be guided by a clear logic that links the actions of people throughout the organization to the success of the firm. But that logic changes over time through the discovery process. So for planning to be guided by strategy, plans must be updated - building on what we have learned from our successes and failures. Only by continually updating our plan can the lessons of the past guide future action. In this way, planning becomes "strategic" when it formalizes how we make sense of what we are experiencing.

¹⁰ Nove, Alec and D.M. Nuti (eds.) 1972. *Socialist Economics*. London: Penguin Books.

For instance, consider the evolution of Apple under Steve Jobs during the company's spectacular rise after the year 2000. Reviewing some of the major events in that rise, note how planned strategy gave rise to unexpected results, leading to updates to the strategy:

January 2001, iTunes: No music store; just a "jukebox" alongside iMovie and other software meant to make the Apple desktop computer more competitive vs. the PC (where Apple was far behind at 3% market share).

October 2001, iPod: Still no music store; meant to help the iTunes/iMac strategy (that remained far behind).

April 2003, iTunes store: Triggers success selling music (but did nothing to help the desktop computer strategy).

October 2003, iTunes for Windows: Hell freezes over. Strategic change away from the desktop computer strategy to becoming the world's music company (regardless of what computer you use).

2003-2007, explosive growth: but as a *music* company, culminating in the company dropping "Computer" from its name.

January 2007, iPhone announced: No app store; just a phone+iPod+browser as a response to music-playing cellphones.

July 2008, iPhone app store: Triggers explosion of app generation and revenue, redefines strategy again, expanding far beyond music.

Reviewing these events, consider that at each point in time, an event guided by a strategy triggers changes that would ultimately render the strategy outdated. Leadership

at Apple did not "plan and execute" a stable strategy. Rather, leadership allowed the strategy to evolve as it recognized the emerging possibilities revealed by their actions, regardless of what they had intended. As Jobs put it in his commencement address at Stanford in 2005:

"You can't connect the dots looking forward; you can only connect them looking backwards. So you have to trust that the dots will somehow connect in your future. You have to trust in something – your gut, destiny, life, karma, whatever. Because believing that the dots will connect down the road will give you the confidence to follow your heart even when it leads you off the well-worn path; and that will make all the difference."

The lesson: The more that you find yourself in changing circumstances, the more that your plan serves not to guide you down a known route, but to trigger your discovery of routes unknown. At each step in the process, the way that you make sense of what has happened - how you connect the dots - becomes the strategy that guides your organization looking forward. During this process, as you make sense of what you discover, you build your organization accordingly.