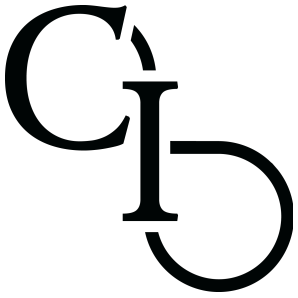
Business

Rationality in Business

Logan Chipkin



CONJECTURE UNIVERSITY

Rationality in Business

Every institution is unique, but they are all designed to, at the very least, maintain knowledge (see our Civilization course). In the West, most of our institutions maintain *and grow* knowledge: democratic governments foster political knowledge, the family unit fosters knowledge of the family's traditions and helps children develop the knowledge of how to live independently, academia fosters theoretical knowledge of how the universe works, charities foster knowledge in the form of social capital and efficient means of directing resources towards the needy, and businesses create knowledge of how to cost-effectively create goods and services that people want.

No institution is perfect, and a rational institution will have at least one robust channel for the error correcting process to occur, at least one well-tailored tradition of mediating ideas. In a rational family, this could be simply norms around discussion when two or more family members have a disagreement about how the household is run. In a democratic government, this could be the voting system (plus all of the discourse and debate in which the citizens engage) that results in the peaceful removal of leadership from power and replacement of them with an alternative. In academia, this could be the peer review process, where new papers face criticism from anonymous academics that the paper's author may address before resubmitting the paper. And in business, an error correction process may be the profit-loss system of the market.

All institutions—not just rational ones—have an overarching problem that they were designed[1] to solve. Sometimes, an institution's ends are its error corrective mechanisms. The purpose of a democratic government, for example, is exactly to foster the peaceful replacement of one suite of leaders and their policies with another—error correction is the very point. But consider an activist organization designed to achieve a particular political or socioeconomic goal. It, too, will have error correcting mechanisms. Members may vote on major decisions, the organization may adjust its strategy in accordance with the will of its donors, they may engage in public discourse, etc.—but they are the organization's means, not its ends. What happens when an institution succeeds—when it solves the very problem it was designed to solve? Or when circumstances change so

[1] I don't necessarily mean *consciously* designed. Indeed, the overwhelming majority of institutions have evolved gradually over time to their present form.

drastically that its error corrective processes no longer work? In principle, both types of institutions can survive indefinitely, so long as they can evolve: by taking on a new overarching problem, by overhauling their error corrective processes, or both.

A business is an institution whose overarching problem is distinct from its error corrective mechanisms—it aims to profitably sell a good or service to people, while its most fundamental error corrective mechanism is the profit-loss system of the market. In this case, the error corrective mechanism directly informs the business whether or not it is succeeding in solving its overarching problem. It has other error corrective processes, too, but they are all subordinate to the profit-loss mechanism.

I had said that all institutions are designed to maintain knowledge. When we hear that, we naturally think of universities, libraries, research institutions— places where knowledge is the obvious output. A widget factory doesn't make the list—it makes widgets, not books about them. And yet nearly every step in building and running one, from sourcing materials to pricing the final product, requires knowledge that no one is born with, that Nature does not provide, and which must be maintained, else forgotten.

What is the difference between a mining company and a star? A mining company extracts ore, refines it into elements such as copper or gold, and delivers them to market. By contrast, these elements are delivered by Nature very differently: copper is forged in the nuclear fusion of stars and dispersed by supernovae; elements like gold are produced in more extreme events such as the mergers of neutron stars. We have nowhere near the knowledge required to reliably produce such elements by these particular processes. And yet no knowledge is required to form a star and ignite its development—they have been doing so spontaneously since a couple of hundred million years after the Big Bang.

But a business intent on creating a fraction of a star's output faces a challenge worlds apart from what the universe has done on its own—the business must find a way to create copper *reliably*, so that it can meet a consumer demand that changes unpredictably, and *profitably* such that the price of its inputs are less than the price of copper. This is something that Nature has never created spontaneously, i.e. in the absence of human knowledge and creativity.

A fundamental component of this business will be a *recipe*—every business that sells goods (services raise a distinct set of questions, addressed below) has a generalization of the instructions for the factory assembly line. The recipe, to be discovered by the founder

of the business (otherwise known as an *entrepreneur*—see our Economics course), consists of a sequence of steps that ultimately take some inputs and convert them into the final good reliably and, ideally, profitably. Although his recipe will be entirely mechanical in the sense that every step can, in principle, be executed by a machine, its discovery is always a creative (and heroic) process. And, because universal constructors are not yet pervasive, many automatable steps will still be executed by people.

But, like all human endeavors, the business's recipe is riddled with errors, even *if* it 'passes' the profit-loss test of the market. For example, the recipe may be less efficient than the entrepreneur prefers, it may be too inflexible to changes in the labor or capital markets, or some of its steps may be outdated due to a technological revolution. Therefore, the entrepreneur may establish error correcting mechanisms dedicated to improving the recipe. These mechanisms are open-ended, constrained only by the entrepreneur's creativity, the overarching goal of the business, the profit-loss mechanism, and the law.

Just as the business's recipe can be subdivided into sub-recipes, so too its overarching problem can be subdivided into sub-problems. Company culture, contracts, organizational structure, feedback sessions, quarterly reviews, breakout sessions, weekly meetings, vendor relations, technology stack, public relations, metrics for success, and employment packages are all attempted solutions to a business's sub-problems, all of which should be subordinate to its overarching problem. Each sub-solution should have an error corrective process in its own right, which, again, should be downstream from the business's ultimate error corrective mechanism of the profit-loss system. Each sub-solution is a piece of knowledge, a way of doing things that should cohere with the broader business recipe.

Everything discussed so far applies most naturally to the goods side of a business—where the recipe is a sequence of physical steps from inputs to outputs. But no businesses are purely goods businesses; most are a blend of goods and services. Consider a semiconductor manufacturer: if production falls short and a key customer threatens to take their business elsewhere, someone must convince them to stay—a conversation that might follow a familiar playbook, or might not. Knowing which is itself a judgment no recipe can make. Or consider a customer who comes to you with a problem unlike any your other customers have raised—one at the edge of what your business does. Understanding whether that problem is worth solving, and whether it holds a clue to

where your business might evolve next, is a creative act. No recipe can tell you that; understanding problems is the work of people. At the other end of the spectrum, a service business's "recipe" may reduce to a single step: bring in a person to creatively attend to the problem, on whatever timescale it demands. Not much of a recipe—but the person solving the problem might recognize it as just the sort of problem a known recipe solves. Or not. And creation begins again.

So at its largest and smallest scales, a business is defined by knowledge creating, error correcting processes. This implies that epistemology, the field of philosophy concerned with the nature of knowledge and how we acquire it, should have much to say about business.

In one sense, all I have done is translate typical business-speak into epistemological (see our *Reasons, People, and Reality* course) terms. But there is a payoff to this shift in focus—because the principles of epistemology are universal for all knowledge creating entities, we may apply them to the prevailing wisdom in the business world as a means of checking whether or not they make sense.

1. For example, how should a business decide between having a hierarchical structure or an egalitarian structure? Such a decision should not be decided by appealing to abstract principles, but by assessing each structure's strengths and weaknesses relative to the business's overarching problem.
2. Relatedly, what should the relationship be between the *ideas* of a superior and the *ideas* of his inferiors? Because it is always a mistake to judge an idea by its source, a boss's ideas should not arbitrarily reign supreme over those of his inferiors. Any business that welcomes ideas from anyone in the company will have an advantage over those that appeal to the authority of its hierarchy when selecting between ideas.
3. Does coercion matter in an employer-employee relationship? The short answer is that coercion is a sign that something is going wrong. Fortunately, coercion can be resolved if the business's culture regards the presence of coercion as a serious problem worthy of solving.
4. Does business work have to be boring? Why should it matter, anyway? Does having fun at work make a difference? Yes, it does—both for the individual and for the business as a whole. A business whose individuals are all having fun is not guaranteed to outcompete those whose individuals are all suffering, but it does

confer an enormous advantage. There are many costs to boredom and suffering—for example, the person in such a state of mind is not primarily concerned with the business task at hand but is instead concerned with how to cope with his own psychology.

5. When does compromising between colleagues make sense, and when does it not? In short: compromising between two different explanations to form a third never makes sense, as the result is necessarily a hybrid, arbitrary, and bad explanation. For example, mixing the marketing strategies offered by two individuals does not *necessarily* make sense, and it would be better to solicit more criticism of both strategies by more colleagues until the decision-makers are able to decide on one of the strategies in its 'pure' form.
6. If authoritarianism does not make sense, what role does leadership play in business, if at all? Leaders have deeper responsibilities than other individuals at the company, and their decisions are more consequential than those of their subordinates. But they are solving a particular problem subordinate to the business's overarching problem, just as lower ranked employees are. Leaders have to create knowledge to solve such problems, just as everyone else does. Coercion therefore makes as little sense in the context of their responsibilities as it does in the context of anyone else's role.
7. If we do not acquire knowledge from data, what role do metrics of success and other statistics play in business? In short: data *may* serve as a way to criticize the ideas and choices of a business *if* their role as such follows a good explanation. Furthermore, all metrics should be allowed to evolve so as to match the business's problem-situation.
8. Which business norms are rational memes (ideas that spread from mind to mind by surviving criticism), and which are anti-rational memes (ideas that spread from mind to mind by suppressing criticism)? How can we identify the anti-rational memes, and how can we replace them with rational memes?
9. If every aspect of a business should be open to improvement that no one has yet thought of, how does a business ensure that it remains stable under unpredictable changes that could affect any part of it? There is no universal recipe for this, and knowledge of how a business can sustain itself under change has to be developed gradually, in an evolutionary fashion. However, it is worth noting that while it is true that one should always be open to criticism, it is true that sometimes a

business must commit to various processes and choices *for the time being*. After all, if *all* a business did was criticize itself, it would quickly fail.

10. Our society rewards successful businesses—not just with profits, but with status and social capital. But if we cannot know which ideas will succeed in advance, then failure is a normal part of knowledge creation, not a mark of incompetence. A culture that shames business failure discourages the bold conjectures that drive progress—including those of entrepreneurs who only succeed because they learn from the failures of others. A culture that celebrates the attempt—regardless of outcome—is one that fosters the bold conjectures on which all progress depends.
11. If any person can learn any skill, then how should employers decide who to hire? If knowledge cannot come from authority, what role do credentials such as degrees and pedigree, play in the hiring process? What role should a potential employee's *interest* in the problem for which he may be hired play? In short: credentials and pedigrees may be proxies if the employer has a good explanation, but they should never be determinative. Nothing can guarantee a successful hire—in general, there can be no guarantees in the world of unpredictable people. A potential hire's interest in both the role and the business tend to be underrated relative to skills, since there is a widespread misconception that skill acquisition takes years.
12. What role do good and bad explanations play in business? Like other aspects of epistemology, this applies to all aspects of a business: leadership, marketing, sales, and so on. So, for example, 'We should raise our prices because I say so' and 'We should hire more salesmen because we have fewer salesmen than the average company' entail bad explanations. On the other hand, 'We should raise our prices because demand for our produce has skyrocketed' and 'We should hire more salesmen because our salesmen are at capacity and we're about to expand our operations' entail good explanations.

Having the right epistemology cannot guarantee that business will thrive, but it will ward off a host of errors that have plagued most businesses since the dawn of commerce.

Thanks to Conjecture Institute Cofounder David Kedmey and Edwin de Wit for valuable feedback.