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## That Which Does Not Kill You Makes You Stronger

By Knowledge@Wharton      Wed, Dec 19, 2012

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*You must make peace with uncertainty, randomness and volatility, claims Nassim Taleb in his new book, "Antifragile." The author of "The Black Swan" calls those who insist on trying to predict the future, 'fragilistas.' We offer an abridged version of a lively book review by Knowledge@Wharton.*

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The day before a big game, regardless of the sport, a team's coach or star player is often asked, "How will you stop the opposing team tomorrow?" The answer typically goes something like this: "We can't worry about the other team. We just have to play our game."

That, in a very simplified nutshell, is the essence of Nassim Nicholas Taleb's highly polemical, always thought-provoking new book, *Antifragile: Things That Gain from Disorder* (Random House, 2012).

Here, though, the opponent is not another team's slugger, quarterback or point guard, but the future and change. The defining characteristic of future change, according to Taleb (who continues a line of argument developed in previous books like *Foiled by Randomness* and *The Black Swan*, is that it is impossible, and foolhardy, to try to predict it. Instead, the author argues, it is essential to make peace with uncertainty, randomness and volatility. Those who do not—who insist not only on trying to predict the future, but also on somehow trying to manage it—he disparagingly calls "fragilistas."

*Antifragile* is divided into seven sections that Taleb calls "books." In a prologue, he explains that each is, in a sense, a long personal essay, "mixing autobiographical musings and parables with more philosophical and scientific investigations." The author introduces fictional characters such as Fat Tony, who epitomizes the straight-talking "street" knowledge of the practitioner as opposed to the fragilista.

In addition to "fragilista," he coins or adopts a number of other terms; delves into extended asides on Greek philosophy and mythology; and in general fashions a thoroughly idiosyncratic approach to his subject matter. The result is a work that is readable and entertaining, if at times a bit unwieldy.

### **A future we can't predict**

Taleb advocates what he calls "nonpredictive decision making" focused on the ability of the unit in question (whether that be an individual, institution, industry or society) to withstand unexpected change. Yet to simply survive is not enough. Taleb is interested in things that actually thrive on uncertainty. To merely avoid harm is, in his terms, to be *robust*—and at times this is an acceptable result. Robustness falls in the middle of a continuum he calls The Triad. At the far left is *fragility*—that which requires tranquility, certainty and predictability—and at the far right, in the absence of a better word for it, is *antifragility*.

Antifragility, it should be pointed out, doesn't mean that volatility will always be experienced positively. It simply means that the antifragile has more of an upside than downside from random events. As Taleb notes, "Some things benefit from shocks; they thrive and grow when exposed to volatility, randomness, disorder, and stressors and love adventure, risk, and uncertainty."

Another sports analogy, one Taleb himself uses, effectively illustrates the idea of benefiting from shock. When we go the gym and lift heavy weights (barbells later become a key image in the book), we intentionally apply stress to our body. Muscle tissue is strained and even broken down. The body's response is to overcompensate to the trauma and emerge stronger than before.

### **The cat and the washing machine**

Nature and natural systems are an ongoing reference for Taleb—not just as illustrative analogies, but as part of the very fabric of his worldview. For him, nature is the ultimate model for how to deal with uncertainty. Nature does not need to predict the future in order to deal with its unexpected turns. The information volatility provides is digested and adapted as part of the evolutionary process. In this sense, nature “loves small errors.”

Nature is also not “safe.” It accepts short-term loss for long-term gain. For example, Taleb cites the natural cycle of forest fires that clear the forest of highly flammable material and weed out weak and vulnerable growth. Suppressing these fires artificially (i.e., suppressing volatility) imposes a false short-term stability while increasing long-term risk. We get fewer fires but more devastating ones. This basic principle can be applied to human systems as well. Government bailouts that prevent certain businesses from going under, for example, only increase the possibility of system-wide collapse.

### **Medicine and barbells**

The practice of modern Western medicine is a topic of great interest to Taleb in its own right. But it also provides him with a set of clear examples of the perils of the fragilista's tendency toward what he terms “naïve interventionism.” This is a category of intervention that produces small (or no) visible gains, while creating the possibility of large (but often not immediately visible) harm. Examples include statin drugs to treat high cholesterol (where fifty patients have to be treated, at uncertain cost, to prevent a single cardiovascular event) and annual mammograms for women (which actually increase all-cause mortality for the test group).

In opposition to this approach, the author cites the part of the Hippocratic Oath that cautions, “First, do no harm.” Unfortunately, the pervasiveness of professionalization in our society creates a bias toward intervention—in other words, the restraint of inaction is not likely to be rewarded. Nonetheless, in medicine and other areas, he asserts that the first rule should be to “avoid interference with things we don't understand,” which, in Taleb's view, covers a lot of ground.

Taleb is a fan of barbells as an exercise tool. But he also uses the image to convey the “bimodal” approach he suggests is the best way to deal with uncertainty and cultivate antifragility. In keeping with the image of the barbell, the idea is to avoid the wishy-washiness of the supposed “Golden Middle” and instead concentrate on two contrasting but complementary strategies: extreme risk aversion on one side, and extreme risk loving on the other.

For example, in the area of personal investment, you might invest 90% of your funds in something as radically safe as cash, while putting 10% toward extremely high-risk, high-reward investments. Your

maximum loss would be capped at 10% of your assets, whereas putting 100% of your assets in so-called “medium” risk securities carries a danger of losing everything. Strive to be 90% accountant, 10% rock star, Taleb cheekily suggests.

### **Skin in the game**

Taleb has nothing but disdain for policymakers or pundits who enter the fray of public policy without any personal stake in the issue at hand. They have no “skin in the game,” as he likes to put it.

In a final section devoted to the ethics of fragility and antifragility, Taleb laments that this kind of disconnect between influence and personal risk is only growing: “At no point in history have so many non-risk-takers, that is, those with no personal exposure, exerted so much control.”

Taleb characterizes this as essentially a “transfer of antifragility,” with certain individuals exerting influence without cost (remaining antifragile) while others bear the consequences (increased fragility). Such a transfer is, he asserts, a kind of theft, and it raises a profound ethical question, perhaps the dominant one of our time. Somehow, he writes, we have to “make talk less cheap.”

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