Chapter 7

Assumptional Analysis: The Key Role of Assumptions

We cannot emphasize enough the importance of assumptions. For this reason, we want to describe a general method known as Assumptional Analysis for uncovering and analyzing key assumptions. It's best described in terms of an important case with which Mitroff was involved.

The case involved McNeil Pharmaceuticals. Indeed, Assumptional Analysis owes its origin to it.

The case concerned the fact that a major painkiller that was a financial mainstay of the company was threatened by the onslaught of cheaper generic drugs. If they were successful, generics would in effect destroy the market for the company's painkillers, thereby threatening its entire financial standing and well-being.

Since the company was threatened as a whole, all of the top executives were involved in responding to the situation. At the heart of it was the fact that three equally powerful groups of the top executives recommended three very different ways of combatting the threat. One group wanted to lower the price of their drugs, in effect to "out-generic the generics." Another wanted to raise the price, thereby sending a clear signal to consumers that they had supreme confidence in the fact that their drug was vastly superior to generics. The third wanted to hedge their bets by setting the price midway between the first two groups. Since all three groups were of equal standing, none of them could force through their individual strategy without the full consent of the others.

In effect, all three groups were making very different assumptions about the key Stakeholders who were at the heart of each strategy. Among them were Patients, Pharmacists, and Physicians. The difficulty was the fact that all of the groups were only barely aware of the assumptions and how they influenced their strategies.

This was the situation when James Emshoff, a researcher at the Wharton School at the University of Pennsylvania, and Mitroff entered as external consultants. Mitroff, who by then was a Full Professor at the Graduate School of Business at the University of Pittsburgh, was a Visiting Professor at Penn for the year 1978–1979.

To get at the assumptions, Emshoff began by asking what each Stakeholder needed to be like for a particular strategy to work. Next, the assumptions were then plotted on a two-dimensional chart that showed how they interacted to form three very different, but equally coherent, Belief Systems.

The horizontal dimension ranged from those assumptions on the Left that were Relatively Unimportant to those on the Right that were Extremely Important to a strategy's success. The Vertical dimension ranged from those assumptions on the Top that were felt to be Certain to those on the Bottom that were felt to be Uncertain. They were thus as likely to be False as they were to be True.

All of the groups felt that the key assumptions with regard to Patients were both Certain and Very Important. Namely, Patients wanted high-quality, low-price drugs. At the same time, they would go along with whatever their Primary Care Physician recommended. They also felt that Pharmacists would go along as well with whatever a Physician recommended, but they were less certain for in some States, Pharmacists were mandated by law to recommend a lower-price generic drug if it was available. But the biggest difference by far was with regard to Physicians.

The group that wanted to lower the price of the drug was assuming that because of the rising costs of Healthcare, Physicians were increasingly Price-Sensitive. In sharp contrast, the group that wanted to raise the price of the drug was assuming that Physicians were Price-Insensitive. If a Physician felt that a particular drug was absolutely necessary to the health of a Patient, then he or she would prescribe it regardless of the cost. But once the various assumptions were stated, neither group had the Data to prove its case beyond all doubt. Were all Physicians everywhere Price-Sensitive or Price-Insensitive to the same degree? They didn't know because they never had to test their assumptions before. Again, they were largely unaware of them.

Even though they couldn't agree on a final strategy, as a result of the process, they decided to carefully raise the price of the drug in certain key test markets to see what the responses were. They reasoned that if they lowered the price of the drug, then they wouldn't find out if they could have raised it for who would push back against a lower-price drug.

We will not burden the reader with further details except to mention the name of the drug, Extra-Strength Tylenol.

7.1 Tech's Misguided Assumptions: The Intelligent Person's Guide to Thinking the Unthinkable

Because of their extreme importance, assumptions warrant further discussion. Because it affects every aspect of our lives, the assumptions we make with regard to Technology are among the most critical.

Given that humans lack perfect knowledge, we have no recourse but to make countless assumptions every day just to get up and function. Thus, we have to

assume that our fellow citizens and creatures are basically predictable and trustworthy; our institutions will work as intended; the sun will rise tomorrow as it always has; etc. In other words, we have to assume the orderliness and predictability of the world and our fellow beings. In this way, a whole array of assumptions underlies everything we do and think.

To challenge our assumptions requires that “We Think the Unthinkable.” It involves surfacing the underlying assumptions on which we depend and take for granted, and then doing everything we can to question their validity and in this way anticipate their serious challenge, if not ultimate demise.

But herein lies a fundamental paradox. Because they are the very foundation of all that we think and do, for the most part, the great body of assumptions on which we depend are largely invisible. (As we shall see, the same is largely true of Corporate Culture.) Most of the time, they operate safely well below the plane of consciousness. For this reason, to question them openly is often regarded as strange, if not downright bizarre. Only in times of severe and prolonged crises when our assumptions no longer serve us well do we become aware of them. As painful as it is, we're finally forced to confront and challenge them.

Tech has reached this point. The largely taken-for-granted assumptions that underlie it are no longer working for the betterment of humankind. As a consequence, in spite of its many benefits, it's now one of the greatest Existential Threats facing humankind.

The following are prime examples of the major kinds of assumptions that Tech takes for granted:

1. The idealized nature of end users
2. The nature, i.e., primary benefits, of Technology and its underlying ideology
3. The idealized contexts in which Tech is used and operates
4. The broader groups of Stakeholders who interact with Tech and on which it depends
5. The underlying views of Crisis Management

To be sure, there are more than merely five categories or types of assumptions, but these are enough to pinpoint the general kinds on which Tech not only depends, but are needed to make it work.

End Users

It's virtually never stated explicitly, but a basic, taken-for-granted assumption is that users are conscientious, responsible, and sufficiently intelligent. They are therefore both able and willing to follow instructions exactly as intended to ensure the safe and responsible use of a Technology. It's also assumed implicitly that they will not intentionally abuse or misuse it.

Facebook is *the* classic case of mistaken, taken-for-granted assumptions. To reiterate, no prior thought was given to the fact that it would serve as a perfect platform

for Cyberbullying 24/7 and thus to torment relentlessly those at most risk, young children. Even after Cyberbullying occurred repeatedly, it took Facebook far too long to take appropriate corrective action. In this and countless other ways, Tech makes all kinds of idealized assumptions about users, not to mention a host of other Stakeholders.

We cannot emphasize enough that if early on Facebook had assembled groups of Parents, Kids, Teachers, etc. and asked them to Think the Unthinkable, we have little doubt that they would have come up with the strong possibility of its being used for nefarious purposes. Facebook is still not responsible enough.

The Underlying Ideology of Technology

A previous book, *Technology Run Amok: Crisis Management in the Digital Age*,¹ explores the primary belief system of technologists and thus underscores modern Technology. We call it The Technological Mindset. Thus, a major, taken-for-granted assumption is that “Technology is the solution to all of our problems, including those caused by Technology itself.” For another, “Technology is the single factor most responsible for material progress.” Still another, “technologists need only be concerned with the positive aspects and Benefits of their marvelous creations. The Dis-benefits, if any, are secondary and thus the major concern of others.”

Even though the history of Technology demonstrates repeatedly that along with all of their positive Benefits, all Technologies produce the exact opposite of what they promise, technologists still generally overly hype the Benefits to the virtual exclusion of anything negative. As a result, they are oblivious to the fact that no Technology could even exist, let alone operate without a whole host of societal institutions both to nourish it and give it the support it requires on an ongoing and long-term basis.

It’s also assumed that not only will we adapt to any and all technologies, but it’s the fundamental duty of humans to do so. Notice that in no way does the assumption actually guarantee that we will adapt. That’s precisely why it’s an assumption, not a fact.

One of the most important assumptions concerns Racial and Ethnic bias. In particular, the developers of Facial Recognition did not take into account that it’s consistently biased against women of color. It repeatedly misidentifies them, leading to false claims of the commission of crimes.

In sum, the general assumptions of technologists are not broad enough to be widely inclusive. They lack both the interest and social maturity that are required to truly develop Technology for the betterment of humankind.

¹ See Mitroff, *Op. Cit.*

The Various Contexts in Which Tech Is Used and Operates

The major operating assumption here is that Technology, specifically Social Media, will not serve as major vehicles for the spread of Dis- and Misinformation, Hate Speech, Conspiracy Theories, Far Right-Wing Propaganda, and Direct Interference in our Elections. If we had deliberately set out to accomplish these and other contemptible ends as effectively as possible, we couldn't have invented a better means. Once again, it requires Thinking the Unthinkable systematically and Systemically.

The Broader Groups of Stakeholders Who Interact with Tech and on Which It Depends

A major assumption is that malicious and nefarious actors will not prevail. They will not take advantage of a Technology for antisocial, criminal, or evil purposes. Given the direct interference by foreign governments in our elections, this particular assumption has failed miserably.

And of course, users have wrongly assumed that Tech companies will both protect and safeguard our personal data, and most of all, will not sell it to third parties for the financial gain of others.

Tech's Underlying Views of Crisis Management

A front-page article in *The New York Times* reported that Amazon is responsible for at least half of all the book sales in the USA.² This not only allows it to crush the competition, but to set whatever prices it wants for books. If a publisher does not agree to its terms, then Amazon refuses to carry its books.

A highly disturbing consequence is not only Amazon's absence of quality control, but its basic lack of concern with it. Not only has it carried counterfeit books, but it's done little to curtail their all-too-frequent appearance on its website. One of the most disturbing cases concerns the poor print in bogus Medical books. The correct dosages for medications are often dangerously misleading, thereby putting the health of patients seriously at risk.

Amazon's attitude and behavior is unfortunately far from the rare exception. It's reflective of the Tech's industry general attitude toward Crisis Management, which is largely Reactive. "Don't do anything until the crises are so many and so bad that one is finally forced to act!" is the mantra.

²David Streitfeld, "Amazon's Control Over Books Shows the Perils of Tech Power," *The New York Times*, Monday, June 24, 2019, p. A1, and A12.

Even more serious crises are in the making. Increasingly, in our quest to become The Masters of Human Evolution, and thereby control it for our benefit, we're playing with forces of whose ultimate consequences we have little knowledge. To reiterate, in the hope of curing childhood diseases, Chinese doctors have made significant modifications in the DNA of twins, thereby giving rise to the all-too-real fears of "designer babies." We are faced as never before with the foreboding question: "Who or what will be human?"

7.2 Concluding Remarks

It's often contended that it's virtually impossible to predict the crises associated with any enterprise or institution. (Talk about a major taken-for-granted assumption!) If by this one means that one cannot predict the exact forms that specific crises will take, then this is true virtually by definition. Nonetheless, it ignores the basic fact all crises involve the direct collapse of the assumptions that we take to be true without question. Indeed, the longer that they operate with impunity, the more we are setting ourselves up for a crisis. It's precisely for this reason that Proactive Crisis Management is concerned with the continuous scrutiny of one's fundamental assumptions. While not perfect, it's the only insurance we have against major crises and calamities. It's key to Thinking the Unthinkable!

It's time to abandon once and for all the facile belief that examining one's assumptions is a luxury. To the contrary, it's an absolute necessity.

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