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Unintended Consequences

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M.A.D. & corporate redirections

It is a well-oiled joke that the acronym for Mergers, Acquisitions, & Divestitures (MAD) is also the acronym for Mutual Assured Distraction (the 20th Century rationale for the nuclear arms race). Much has been written elsewhere about how corporate telecom MAD resulted in enormous numbers of competing applications performing OSS and BSS functions, often with significant overlap and duplicate or contradictory data.

For example, after dozens of acquisitions, WorldCom ended up with over a thousand OSS and BSS applications. We know that each of these OSS/BSS applications came with constituent groups holding vested interests in keeping their application alive. This resulted in the "chaos wars" inside telecom IT departments. Ultimately some decisions were made about "IT Simplification" resulting in winners and losers of the vested interest game. Downsizing decisions swiftly followed, sweeping the "losers" out, often before any migration or consolidation plans had been considered.

Headcount in Telecoms was reduced for many other reasons and few of them included measured assessments of corporate needs against the skills and experience of the incumbent labor force. Some results of the downsizings that we explore below remind us that the MAD acronym is also close to the acronym for Mothers Against Drunk Driving (MADD) – and that some drivers of the corporate downsizing bus were impaired by the lack of well-structured plans for operating in the post-downsized environment.

Another well known, but little heeded aphorism, is "The Principle of Unintended Consequences". The executives and HR teams who released these people are not to be blamed or praised for their actions and the outcomes we explore below. But we should understand and temper our future enthusiasms for short term "operational efficiency" gains in the face of these extraordinarily costly consequences. After all, MAD is not just a legacy of the turn of the century. Continued consolidation of telecom is occurring today – as this is being written, Level 3 announced a $1.4 billion acquisition of Austin-based Broadwing Corporation. Chief Executive James Crowe is quoted in the *Dallas Morning News* as saying, "We believe the combination of Level 3 and Broadwing will create value through the elimination of duplicate work and operating costs." This may very well be true for Level 3, but what we have here is an example of the "tragedy of the commons". For those of you who do not remember your civics, the commons of the township is a shared place for everyone's flock to graze. It is an advantage to each sheep herder to add a few more sheep to his flock. While each sheep may be thinner, his overall wealth goes up. However, everyone doing this eventually leads to so many sheep that the commons is overgrazed, fails, and no sheep can feed, and the tragedy occurs. This shows that the actions of individuals, furthering their own interests, can overload the system and eventually cause themselves and everyone else to lose.

Corporations spend lots of effort recruiting the right people, and most have extensive retention programs to keep valued employees from departing. Sometimes they take legal action against those who do leave with valued experience and knowledge of corporate strategies. Downsizing completely counters these costly and hard fought normal retention activities. With just one reduction-in-force, years of work "keeping the flock" can turn into a scattering to the hills of all the sheep. We shall show that the sheep turned loose will contaminate the environment and perhaps crash the market as well.

A cautionary tale of corporate redirection

The full effects of a reduction-in-force are not realized for a decade or more, so we can only surmise the full impact of OSS and BSS reductions of the last six years. Before we begin that analysis, let us explore an example where we can see the beginning-to-end effects of corporate staff reductions: the complete effects of a downsizing that occurred in 1996-1997 which took place in the Legal Department at MCI.

William McGowan organized MCI Communications Corp. to take on the monopoly controlled by the original AT&T. MCI fought AT&T in court for more than a decade until it won an antitrust lawsuit in 1980 that led to the breakup of the Bell monopoly. To win this hard fought legal battle, McGowan built up the largest, best legal department ever created in telecom. The legal department occupied most of an entire building in downtown DC and nearly equaled the staffing numbers of engineering or operations divisions. It was the brilliance and experience of this legal team which lead to the MCI win. Then McGowan died. Bert Roberts took over as Chairman of the Board of MCI in 1996 - prior to that he was Head of Marketing reporting to McGowan. Roberts determined that the major legal goals of the company were accomplished and that the new needs for MCI were marketing and sales. In this he probably was correct. He then drastically downsized the legal department, and released many of the contracted private legal firms and lobbyists too.

Remember the "tragedy of the commons". The most experienced, winning team of lawyers and lobbyists had to find work. It was quite reasonable for the "losers" in the deregulation battle, the RBOCs, to want to hire the winning legal teams, recently fired by their rival, MCI. Over the next decade, these experienced legal and lobbying teams used their formidable knowledge and experience for the "other side", developing the successful strategy to turn the tide of regulation against the long distance carriers and back toward the RBOCs. These lawyers became the principle force in the downfall of MCI and AT&T (long distance). Roberts, by firing these lawyers in 1996-1997, turned loose the forces which would lead to the need to sell MCI five years later.

It is nothing personal

It is possible that this article has a very personal impact for you as a reader. You may have been downsized once or more already. If not, you may well worry about being downsized in the future. How do you get picked for a RIF or downsizing? One of the authors was once asked to help a friend out: "Please tell my spouse that my termination was not about any fault of mine." Downsizings are very emotional times for the employees and their families. Speaking from experience, the downsizing of MCI WorldCom, just before and during the first six months of its bankruptcy, was particularly brutal. At your desk one day; on the street the next without any severance pay or health insurance. Groups of displaced employees banded together and sought mutual support. We know such a group of top engineers and strategists – their families suffered and they were rather bitter. By following what happened to them and others we know, we can tell a preliminary story of the results. While not a scientific sample, this forms a basis for our assessment of potential future impacts of downsizing this group.

What this group learned over time was "It is not your fault". Actually it is seldom about you, as an individual, but it is sometimes about the cumulative choices you have made and the roles you have played in a company. And somewhat counter intuitively (at least for those MADD corporate bus drivers), those who have taken on many different roles and those who have directly influenced the company's growth often are the first to leave. For example, highly experienced and confident employees are self selecting when a "buy out" offer is made. Those most able to get a job elsewhere jump at the opportunity; so the most skilled leave in disproportionate numbers. Also, those close to retirement accept the offer, so the most experienced leave in disproportionate numbers. But what about those downsized involuntarily? Are these reflective of the general makeup of a company? Are they typically selected from the lowest performing group of employees? The answer is also no. Let's look at why that is...

In doing so, let us coin a new use for an old term, the sutle. This is our name for the specialists brought in to do the difficult work of trimming spending and workforce. This job is almost never done by the company itself and gets contracted out to companies and groups which specialize in this work. These groups follow two common techniques.

(1) Recapture any unspent money by eliminating projects which have unspent allocated capital or large operational budgets.

Ironically, the groups with unspent capital are often the teams with the most drive and creativity - those that proposed the need for, and then successfully fought for, those funds. Frequently these projects represent strategic new directions for the company. The sutle looks for these unspent dollars on a balance sheet and redlines the projects. This is totally non personal and the records of those affected are never even examined. Result: the top teams get released.

(2) Avoid targeting specific employees.

If a company fires an individual, the company must have a very strong case that is fully documented to prevent legal action. This has resulted in the "balancing technique" that sutle teams (or HR departments) use for a non-specific reduction. A "business financial" reason is cited as the overall cause for the reduction. Then for the unit affected, a profile of the existing employment population is drawn up: proportion of men to women, whites to minorities, performance evaluation percentile, etc. The group selected for downsizing is balanced to mirror this average picture of the division. Here again, top performers are lost to the company.

In all these actions, the brain trust of a company is reduced to support immediate current financial realities. Short term gains are made in the eyes of Wall Street, but long-term costs are accrued by the loss of some of the company's most strategic assets. But it really is "nothing personal".

"Precautionary Principle..."

What happens to all those telecom experts that are tossed aside? Taking a non-personal approach, let us pursue a macro economic observation of what happens when a planned intervention is thrown into a complex system. We will look at the entire horizon of the telecom industry and its impacts on economies – clearly a complex system. In this section we will see how "good intentions" conceal unintended negative consequences.

The principle of “unintended consequences” has been known since the 18th century and is rooted in Scottish pessimism. One manifestation of this principle is that voiced by Patrick Hutber, an economist and journalist in London. Hutber's law states that "improvement means deterioration". Accepting this pessimism sometimes leads to a rationalization that “counter effects” are beyond control, so “let’s not worry about them.” We suspect that this is often the mental state of executives during and after a downsizing.

Yet the most systematic early exploration of the principle of unintended consequences was undertaken by the great sociologist and philosopher of science, Robert Merton. His functional view sees unintended consequence as a sometimes preventable activity if one understands the system and follows the ‘chain of causes’ that counter the planned intervention, such as:

1. Ignorance of the effects of an action,
2. Errors in capturing the chain of causality,
3. Vested interests - counter interests that are actively pushing against the intended change,
4. Counter values which seek their own truths irrespective of causality, and
5. Wishful thinking by those taking the action.

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In corporate MAD, short sightedness and wishful thinking is in the forefront, but most of these counter interests are also in play. Robert Merton, an optimist like us, argues that comprehensive investigations can result in decisions which might not manifest strong negative externalities.

As a precautionary tale, we explore below some of these “chains of causes.” Our specific meaning for this principle of unintended consequence derives from the dynamics of complex systems. Failure to discern the result of an action is often an inability to see the real borders of a system. How far do the effects propagate? What is the scope of an action? Complex systems form stable pools of continuing causality – effects do not stop until a new equilibrium is achieved. Remember the example of the release of lawyers and how this brought about a new set of stable actors in the telecom economic system. Complex systems conserve resources although these resources often undergo transformations. Looking at the larger economic system, we can show how lay offs of skilled OSS and BSS engineers can adversely affect the future of a company. With our traditional optimism, we hope this type of analysis will be used to avert future negative effects.

A Litany of Unexpected Consequences

We do not attempt to explore all the consequences that resulted in the OSS/BSS staff reductions. But we shall show a representative sample based on following the group released from MCI WorldCom and the vendors that supplied MCI WorldCom. For when a company downsizes, the next order effect is the reduction in demand for new products and services from vendors. These vendors, faced with reduction in orders, must also downsize. This leads to an exponential increase in displaced, skilled workers until the limit of the supply chain membership is reached. The curve of displaced workers resembles a "hockey stick", or more formally, a logistics curve. The effects of these reductions and the second and tertiary effects we examine are not yet fully known. The complex international telecom market has not yet achieved equilibrium. Nevertheless, these limited examples provide much food for thought:

1. Growth of Enterprise Networks

Some of the released telecom experts were hired by the business customers of the service provider. Prior to the bursting of the bubble, the skill set for new digital and mobile technologies was contained largely inside the telecoms that created the products and built the networks. When a pool of highly experienced talent appeared, big business customers hired them in droves to help navigate the chaos of the telecom industry and take advantage of the significant cost savings available from internal IP-based global networks. As a result, the customers of telecom now know leading edge networks and technology just a well as the telecom service provider. They are less likely to rely on the telecom sales force for network designs and less likely to buy managed services. When they do buy, their "insider" expertise gives them a keen understanding of the margins and costs and they can negotiate better contracts with lower profits for the service provider. They negotiate better SLAs.

2. Purchasing Preferences

Purchasing decisions are influenced by personal experience. For example, some of the engineers and managers downsized from the vendor community put their stamp on their new employers, both service providers and enterprises. These experts typically bring a predisposition to buy from their prior employers, if the stuff worked. Cisco has benefited from this effect, especially given its internal certification program, to produce a cadre of engineers who will only buy Cisco, lest their personal certification is worthless. On the other hand, employees bitter from a poorly handled downsizing, are less likely to buy from their prior employer, as are those insiders who know that the technology is not quite up to competitive specifications. For example vendors who rely on solid market performance in one product area to drive sales of new product lines may find themselves cut out of a bid because the customer's evaluation team includes employees who know that the new product is not yet up to scratch.

Customers no longer need to buy CPE and local networks through their service provider. This in turn caused a secondary reduction is service provider staff who ran the managed service and customer network resale divisions. It is likely that the experience of this group will also transfer to customers and

will direct service provider competitors like Systems Integrators (SI). Soon Managed Networks will be an even more important line of business for SIs, to the misfortune of service providers.

3. Knowing where the "floor" is

Enterprise customers hiring prior vendor or service provider engineers and managers also gain competitive pricing information. They can negotiate prices and terms from vendors which, in the past, were only given to the largest of the service providers. This further reduces the margin of advantage once held by the service providers over their customers.

4. Managing Enterprise Networks

For enterprise customers comfortable applying advanced technology, deep packet inspection measurement devices, enforceable SLA's, and autonomic network control devices allow traffic shaping by the customer to best utilize their network – often a composite network leased from many suppliers and patched together by the enterprise customer. Traffic management by customers means they can lease from providers offering wholesale or no frills networks, further driving down telecom profit margins.

5. New markets for OSS/BSS applications

The expert engineers that end up with enterprise customers typically want to leverage all of their old skills, such as customizing and operating OSS/BSS products. Business customers are now therefore buyers of the OSS and BSS products that before were just used by telecom providers. This means that vendors have a significant new group of customers whose needs must be addressed, which causes the vendor to shift priorities to meet these needs creating, for example, a high priority on network performance monitoring in support of those detailed SLAs. In crossing from Service Providers to Enterprise markets, OSS/BSS application price reductions are likely, but the potential customer base for these agile vendors has grown significantly. So those vendors who can adjust to the enterprise market survive and perhaps flourish. A decade ago HP Openview once navigated this transition and benefited greatly from it. However, OSS/BSS application vendors catering to new enterprise customers reduces the impact telecom service providers can expect to have in driving future product development by the successful vendors.

6. Gaining the inside track

Procurement and test lab experts are also sought after by vendors and enterprise customers seeking the "insider" knowledge of service providers. These insiders can use their knowledge and personal relationships to reduce procurement time or even win a sale that they might usually have difficulty winning. The result could mean a less competitive solution than if the procurement procedures were followed to the letter.

7. Knowledge transfer to competitive service providers

Smaller service providers have also hired from our downsized talent pool. In the '90's CLECs were generally less skilled than the incumbents and at a disadvantage for selling high value products. Today, surviving CLECs know just as much as the big providers. This makes the surviving smaller carriers and regional specialist carriers generally rather successful and therefore attractive takeover targets. One of the benefits the larger carrier seeks out of the merger is the agility and flexibility inherent in smaller companies. Ironically, this puts "returning" employees at an advantage in assignments, raises, and retention over those employees who never left.

8. Disillusioned employees

Many observers have shown that downsizing has lead to a "breaking of the trust" and reduction in the enthusiasm of employees. Being left with "more to do", coupled with reductions in raises and bonuses, those that are left represent a brooding labor force. They know the company has no loyalty to them, so why should they have loyalty to the company? This makes retaining the best talent tougher. At first, the "more to do" aspect has lead to increases in productivity of telecom companies. But this can only be maintained for so long before exhaustion and the impact of reduced dedication and loyalty begin a counter swing. Fear of losing one's job is not a good long-term motivator. Eventually, productivity will likely decrease to productivity levels lower than that maintained during the telecom boom.

9. "In sourcing" for Asia Pacific

Another very significant trend is the shifting of skilled and experienced talent to the Asia Pacific region. Before, many strong engineers from the east moved to the USA and Europe to fill the vacancies in the rapidly growing telecom ecosystem. After the downsizing of the USA and Europe, many returned home with state-of-the-art skills and experience. Relying on the returning engineers to tag the right people to recruit, companies in China, South Korea, and Singapore recruited some of the very top engineering and management talent (loyalty being no longer a winning personal strategy). We know of fellows, distinguished engineers, VP's and at least one European telecom CTO, who now work for Asian telecom vendors. Competitive advantage is moving toward the east. They are now designing some of the best telecom equipment at significant price discounts to North American and European vendors.

10. Security risks

A drastic dimension of idled worker which we hope does not manifest itself, is the destructive behavior of the distraught and psychologically disturbed. We know that downsizing strongly affects individual self esteem and family dynamics. From this fairly large pool of disillusioned experts, statistically, there must exist a few who will not cope successfully with the change in their work reality. This population, while likely quite small, is also exposed daily via the media to the disproportionate impact that terrorist activists have – some may see this as a means of regaining personal stature or for enacting revenge, no matter how negative the publicity. That these are also highly skilled and experienced network engineering or network management workers presents a grave security risk since this group knows how to disrupt networks.

11. Impact on strategic planning and direction

One of the groups frequently impacted in each merger or downsizing is the "Strategic Engineering" group. This is the small group of the very top talent in a service provider or telecom vendor charged with shaping the future. Traditionally telecom has had stronger planning organizations over other industries. When a merger occurs, generally one or the other strategic groups is released, or a reduction occurs in both. In a bankruptcy or corporate sell off, knowing the strategic future of course has little residual worth; these teams are downsized or idled. For these self-driven premium employees, being bored also leads to departures.

Specifically, this year the IMHO that was the top strategic OSS planner at AT&T was downsized with the SBC merger. The top OSS strategist at BT was hired away to an Asia Pacific company. But for many unemployed planners it is hard for all to find new strategic jobs in a smaller telecom ecosystem, so a great proportion of this best talent jumps entirely away from the industry.

Disturbingly, the loss of strong strategic teams has lead in a few instances to a type of product monotheism at some service providers. This leads to having only one strategic vision – we see this in American fiber-to-the-home and IPTV plays. Where strategic teams no longer exist, are in disarray, or no longer have any influence, service provider companies exhibit a tendency to abdicate planning for a simple "follow the leader" strategy - adopting strategic plans wholesale from perceived market leaders. Hence the great attention paid to BT's 21st century network and the Quad plays of Telcom Italia and France Telecom.

It is ironic that the very groups which should be championing diverse strategic directions, and incidentally, predicting and stopping these "unintended consequences" are the arm of the corporation most negatively affected by MAD. As the complex telecom ecosystem swings back to a new equilibrium, likely strategic groups will again emerge to guide the industry. In the mean time, the Analyst and Media companies will set our direction by "picking trends."

The Bottom Line

As our analysis shows, there are winners and losers every step of the way: the people who are laid off and those who find rewarding new opportunities; the employers and vendors who lose expertise, insights and passion; and those who gain from hiring that talent. There are likely to be welcome surprises created by talented people who move out of telecommunications into entirely new industries.

What is also clear is that “unintended consequences” need not always be so. With some careful consideration and a serious effort to learn from recent down sizing experience, the telecommunications industry and its employees could reap the benefits of more logical and uniformly positive “right sizing” initiatives. More importantly, we think that this analysis shows that the biggest potential “losers” are the biggest of the service providers, and that action now to reinforce programs to identify and retain, or recapture, their best and brightest is essential to having the experienced experts in place to design and execute strategies that can keep big service providers in the game.