

The Case for Long Shots

by J. Baldwin

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The world's most popular camping tent was once a hard sell to retailers, but it ultimately demonstrated the value of an innovative gamble.

by J. Baldwin

As the pace of new product introduction increases, corporate leaders are starting to look outside their companies for new ideas. My career as an independent industrial designer and a design professor has given me personal and vicarious experience with a number of such efforts. Not all have made significant money, but each has shown a new direction that has opened up an untapped market.

I'm sure you know the grim statistics: About 90 percent of new products and businesses fail within the first two years. That figure looms large for industrial designers; after all, making successful new products is the heart of our work. All too often, the failure doesn't seem to stem from the product itself or the timing; instead, it has to do with the ways that companies habitually protect themselves from risk.

Any experienced industrial designer knows that business is inherently risky. Every innovation is a gamble — on the product, on the reaction of the intended customers, and on the pure chance that things

will go well. But experience has shown me that the natural tendency to avoid risk altogether can hamstring a company's ability to effectively judge which innovations it can successfully promote. This tendency seems to be strongest when a company most needs (or professes to need) creative contributions, including those from outsiders. That's when a company typically ends up rejecting the innovations that it needs most.

Over the course of my life, I've been involved with a number of inventions that fit this pattern. At the time, their potential seemed obvious, yet each was treated as some kind of outrageous, unlikely long shot. If companies were willing to learn from the stories of those inventions, they might become more adept at distinguishing which gambles are likely to win.

The first time I was involved with a radical invention was in the late 1950s. Not only did the product break through to commercial success, it became an international recreational institution. Today, it is hard to imagine life without it. The product that started it all was the Pop Tent.



Lightweight, easy-to-handle, bug- and weather-resistant tents did not always exist. One day in 1956, an unexpected squall drenched an artist and inventor named Bill Moss — who was then working as an illustrator for the magazine *Ford Times*, published by the Ford Motor Company — just as he was painting a portrait of a freshly caught trout by a stream in Michigan. He had no way to shelter his easel, but he did have several fishing poles with him. In a burst of inspired resourcefulness, he punched their handles into the soft soil to form a rough circle, tied their tips together, and spread his poncho over them to form an impromptu dome.

Bill immediately realized that a perfected version of his improvised shelter could transform camping and hiking from a generally all-male, almost masochistically brutal paramilitary exercise into an enjoyable family activity. If family camping caught on, he reasoned, people would be more inclined to support measures to clean up streams and lakes. To someone like Bill, who deplored the post–World War II deterioration of Michigan’s formerly pristine riparian habitat, this would be a welcome change.

How could a mere tent bring about such a major change in public attitude? By being user-friendly. In contrast to traditional tents — which were heavy canvas structures unreliably supported by a maze of ropes, poles, and stakes (lots of stakes) — the Pop Tent, which Bill Moss soon trademarked, could be set up or taken down by one person in about a minute, even in the dark. The tent’s integral floor and screened windows kept campers safe from snakes and insects. The streamlined shape resisted assault by wind

and rain. It packed neat and small and was about half the weight of comparably sized traditional tents without floors. The Pop Tent was wildly successful, to the point of overrunning its creator’s tiny sewing operation, yet he failed to convince a major tent retailer that its customers would be interested.

The Defensive Mind-Set

I started working for Bill Moss in 1959, just before he licensed the Pop Tent to the King Seeley Thermos Company in a move to meet the astonishing demand, a demand that was rising along with the sales of Ford’s affordable, outdoorsy Ranch Wagon. Instead of featuring unshaven he-men with shotguns in a sinister forest, an article in *Ford Times* showed a handsome young couple with two cute kids and a dog cavorting at a manicured lakeside campsite. Their Ranch Wagon and Pop Tent were prominently displayed in the background.

It was already clear that the revolutionary design could change the camping game. It soon did. Color photos of Pop Tents appeared in national magazines. The combination of an easily set-up camp and an unusually useful car was widely credited with igniting a surge in car camping, which in turn spurred widespread campground and trail building, and eventually a back-country hiking boom that raised public interest in environmental matters just as Bill had hoped. *Ford Times* continued to showcase Moss Associates designs, including the first Econoline van camper conversion, which I designed in 1960.

Note that the Pop Tent’s success did not depend on the conventional marketing approaches of that Edsel era. We did not need user research,

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customer clinics, or focus groups. The product was right and the time was right. Bill's meme-changing design attracted enough inventors, entrepreneurs, and public interest to form an entirely new industry and national pastime.

The Pop Tent was selling well through the Thermos dealers, but we had long hoped to interest Sears, Roebuck and Company, which was then the world's largest tent retailer. After months of runaround, we finally got a 10-minute appointment with the Sears tent buyer. Bill triumphantly whipped open his Pop Tent in less than a minute right there in the office, without a rope or stake in sight. The tent buyer gave it a cursory glance, then snorted derisively, "It's just an umbrella with a floor! If the public had wanted something like this, they would have demanded it and we'd already be selling it. Next!"

We were shocked and dismayed. What could that guy be thinking? Why was he so hostile to a great product that (we assumed) would sell well? Bill Moss wondered what he'd done wrong, but what really puzzled me was the Sears buyer's contention that the public *demands* a product not yet seen or even hoped for. I have heard that claim many times since. I still think that it's a myth.

Experienced marketers know that customers don't demand things they've never seen. The buyer's excuse revealed a commonly held mind-set that tended to deter the introduction of any new product no matter what its advantages. That buyer probably thought he was looking out for the best interests of Sears, but his attitude amounted to a defense of the comfortable status quo against all other considerations.

Defensiveness and innovation rarely mix usefully.

A Fuel-Efficient Gamble

Since that discouraging day, I've learned that most innovative designers have bumped up against that same mind-set. Buckminster Fuller, with whom I occasionally worked, attempted to produce his aluminum Dymaxion "Wichita" House in 1946. The house needed minimal site preparation and no foundation, and could be erected in just two days, furniture and all. Its rot-resistant materials required no maintenance or replacement. Heating, cooling, and dehumidifying were accomplished by solar means. It was uniquely tornado resistant. It was easily upgraded as technology improved. *Fortune* magazine hailed it as a sure moneymaker, but the Dymaxion failed, despite its advanced design and the strong demand for post-World War II housing. In his own recollection of the episode, published in his 1983 book, *A Grunch of Giants* (available at www.bfi.org/?q=node/406), Bucky wrote that he had received about 36,000 unsolicited orders.

Union objections and building codes ranked high among the reasons for its failure, but the fatal problem was that no bank would lend money to tool up for a product that they feared — possibly correctly — would reduce the value of the mortgages they held on conventional homes. Buckminster Fuller resorted to selling stock to finance the tooling, but his startup company could not produce a marketable product in time to satisfy the stockholders. The project ultimately foundered in a morass of lawsuits and hostile attention from the Securities and Exchange Commission.

A more recent revolutionary project, Village Homes in Davis, Calif., has prospered since it was founded in 1975, but it took three frustrating years for its developers, Mike and Judy Corbett, to work past the objections of building inspectors, insurance underwriters, banks, and the U.S. Federal Housing Administration, all of which found reason to block the building of an ecologically sound, energy-efficient neighborhood of 220 solar homes. Utility bills for Village Homes are about 50 percent lower and home prices about 20 percent higher than in nearby conventional developments where the houses have similar amenities. The lucky inhabitants of Village Homes are widely envied.

The concept sounds wonderful, but for 30 years, despite strong demand, no developers, not even the Corbetts, have managed to build another Village Homes. The institutions that obstructed the Corbetts appear unwilling to take what they still consider to be a risk — not a risk to customers, but a risk to the established system.

And then there's my own situation: I'm currently seeking to license a company to produce and distribute a radically improved recreational vehicle I call the Quickup Camper (a name I've trademarked). The patented design is essentially two nesting aerodynamic shells that cover the cargo bed of a standard pickup truck. In camp, it powers open in one minute to become an eight-foot-square, multi-windowed, nicely equipped living space with stand-up headroom and a queen-size bunk. Unlike any conventional RV, it is reassuringly stable, agile, and easy to drive, even in high winds. For 10,000 test miles, it has

averaged about double the fuel mileage of conventional pickup-based RVs of similar amenity.

At trade shows, the Quickup has attracted thousands of visitors and many RV salespeople. Most react positively, including kids who like its spaceship appearance. (To see what it looks like, go to www.quickupcamper.com.) There is nothing like it on the market. It's affordable. It's proven to work well under a variety of conditions. And it seems to be falling prey to the same problems that beset the Pop Tent, the Dymaxion house, and Village Homes.

appeared to be an empty marketing niche: Hundreds of tent campers and empty-nest couples had told me that they would buy a modest, sensible RV, but no available model had yet met their approval.

Despite the good signs, Ford lost interest in the Quickup (mostly because of an internal situation that had little to do with the camper), and it has not been picked up by a manufacturer or distributor. Since the Quickup design amounts to two concentric traditional pickup "camper shells" (cab-high cargo bed covers), I assumed that shell makers would see it as a chance to increase

with unfamiliarity. In its early days, the Pop Tent was utterly unlike any other tent that retailers had ever sold. True, lots of people were buying Pop Tents, but maybe those customers represented the inevitable but limited enthusiasm of a small group of early adopters.

The Sears man also knew that accepting the Pop Tent would lead to an expensive ad campaign and a program to train a sales force in how to demonstrate the product. He may also have believed that the Pop Tent would make the rest of his tent line appear obsolete — which it did. In that case, the Pop Tent might sell well, but overall Sears tent sales would suffer and the man might lose his job — a possibility that he surely kept in mind as he considered each new product. Similarly, the RV makers who have rejected the Quickup probably realize (if only subconsciously) that it would make their profitable line of big, clumsy, fuel-hungry models look bad.

Another reason may be the classic, visceral response to anything "not invented here." I can understand that. Years as a design consultant have made me all too familiar with the reasons that company employees and management do not welcome outsiders. The acceptance of designs from outside can feel humbling; it implies that the in-house group is incapable of coming up with good ideas. The founder's ego may be involved as well: His or her original concepts have worked well for decades. Only rare companies such as Thermos in the 1950s and Procter & Gamble today seem ready to overcome that kind of resistance to taking a chance.

Even when management does not reject new products outright, the evaluation process itself often

"If the public wanted this," the buyer said, "we'd already be selling it."

The project started in 1997 with high interest from Ford, which gambled by sending me a new F150 pickup truck to convert. The company also provided me with exhibit space at SEMA (Specialty Equipment Market Association) in Las Vegas, the nation's largest auto trade show. Ford was willing to place this bet in part because I had a good track record dating back to my 1960 Econoline camper. More importantly, someone at Ford sensed that my design could sell a lot of trucks.

There was good reason to be hopeful: My fuel-efficient design arrived when almost all of the 6 million RVs registered in the country were notorious fuel guzzlers (as they still are), and fuel prices were rising. Increasing public concern about global warming helped, as did the post-September 11 threat of terrorism that caused families to take their vacations by road. Best of all, there

their product line. But the shell makers said, "No, we make shells, not RVs." RV makers said they made RVs, not shells, ignoring the opportunity to introduce a truly new, high-quality product to fill an empty niche at the low end of their price range. Several manufacturers of both shells and RVs seemed to be downright hostile, remarking that the Quickup did not match the look of their other products. I think something else was bothering them.

Window of Opportunity

Perhaps the Quickup concept is flawed, but the positive public reception to it and 50 years of car-camping experience tell me it simply has not yet hit its window of opportunity. I've learned to be patient; I know that there are a host of reasons that ideas like the Pop Tent and the Quickup get turned down. Most of them have to do

minimizes risk at the expense of marketplace potential. I've seen many companies limit their innovation to "benchmarking" (or, to be more explicit, copying) the successful products of competitors, adding only trivial improvements. This practice tends to blur the differences between brands, reducing the individual strength of a brand name and stifling the advance of an entire industry. Worse, the delicate balance of features that made the original successful is often lost. Benchmarking in the RV industry has resulted in annual repetition of tired old designs, with the same flaws appearing year after year; there has been little significant progress in four decades.

Customers also play a role. When customers decide to rent or buy an RV, they have probably

have to be more aerodynamic. I truly believe it is the first of a new breed of RV.

There is one more obstacle to acceptance of innovations such as the Quickup: Most people know that the first version of an all-new design is likely to be less refined than the last version of the old model, with its infrastructure of experienced dealers, repair shops, lenders, and insurers.

All of these reasons for caution make sense, but only if the situation is considered very narrowly. The Sears buyer, the bankers that refused to back the Dymaxion house, the Village Homes regulators, and the RV manufacturers' gatekeepers were all tuned in to profitability — but in the long run, their decisions lost their companies the opportunity to be market leaders.

between management and designers. On the corporate side, MBAs and other executives need to learn to think more like designers. To balance the current needs of their enterprise against its future viability, they need to be sufficiently aware of the potential of new inventions. They need to lose the knee-jerk temptation to downplay or ignore the power of a new idea. That means developing an appetite for qualified risk coupled with the ability to tell hype from substance.

On the designer's side, we need to attune ourselves more closely to the strategic value of our ideas — a gift that both Bill Moss and Buckminster Fuller had, and which explains their successes. Today's most effective industrial designers — and most effective MBAs, for that matter — are trained to work in teams of people with different backgrounds. Indeed, the most successful new products now are developed by teams that include MBAs, designers, and others with broad knowledge. Typically, members of the team know enough about finance, marketing, and insurance to render their opinions more valuable. Outsiders can bring fresh "DNA," providing the diversity that encourages positive evolution.

That is the sort of team I'm seeking so I can finally bring the Quickup to market. Because the camper gets relatively good gas mileage, I'm looking for a company that has a "green" MBA or other environmentally knowledgeable person in management. Such an MBA is very likely to have had an education that covered more than statistical analysis and classic financial practice. These individuals exist. Their education is more omnidisciplinary than overspecialized,

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already decided that poor fuel mileage, gross clumsiness, and other annoyances are inevitable. They aren't looking for alternatives. Moreover, many people think that trailers or motor homes should resemble a house on wheels, or perhaps an Airstream Bubble. The Quickup looks like neither; its unique appearance derives from the articulated geometry that transforms it from road vehicle to living space. That may not appeal to traditionalists, but it could do well in a newly identified niche market. It is also a gesture toward a future when high fuel prices will mean that even RVs will

Over the years, I have noticed that the people who defend the barricades against innovation are likely to hold an MBA or other financial degree. That's why designers of all sorts tend to regard "bean counters" as their most dangerous opponents instead of as potential collaborators. I also know that this perception is a symptom of an underlying conflict: Corporate decision makers know that *new* equals *risky*, and few have the gift for distinguishing between fruitful innovations and insubstantial schemes.

The solution to these problems requires a new sort of interaction

enabling them to see broader and deeper connections as well as immediate metrics and expectations. But where are such people to be found?

I know of two schools in the San Francisco Bay Area (where I live) that are set up to produce graduates with the above attributes. New College of California (www.newcollege.edu) offers a Green MBA (a term the institution has trademarked), and the Presidio School of Management (www.presidiomba.org) offers an MBA in sustainable management. A Google search reveals a number of business schools offering similar courses of study. It looks like a welcome trend.

Perhaps a graduate of one of these schools will recognize the Quickup as the first of a new breed of energy-efficient RVs. That would change the game, all right — for me and ultimately for the RV industry. But whatever the fate of the Quickup, it is clear that the barrier between corporate decision makers and industrial designers must come down. It is an artifact from an old way of working and thinking. Companies that are serious about reaching beyond their own walls must face their biggest obstacle: the minds of their own people. +

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