Faculty of Design

2014

Disruptive Innovation Reframed: Insurgent Design for Systemic Transformation

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Introduction

If you want knowledge, you must take part in the practice of changing reality. If you want to know the taste of a pear, you must change the pear by eating it yourself.... If you want to know the theory and methods of revolution, you must take part in revolution. All genuine knowledge originates in direct experience. —Mao Zedong

September 11th and Occupy Wall St. stand as two of the most important examples of the ascendancy of design at the start of the 21st century. The center mass of the impact of each is blocks away from one another in downtown New York City, and the initiating event of each occurred almost exactly 10 years apart. In spite of their tactical and formal differences, the launches of these acts of defiance were highly disruptive, and yet, we believe that they failed to create true disruptions. Viewing these events and their associated movements as examples of "insurgent design" reveals lessons about the dynamics of disruptive innovation, and calls attention to a dangerous blind spot in our current understanding of innovation.

Innovation is really only interesting and important when it is disruptive. Disruptive innovation makes it impossible for existing players to compete on their own terms. We believe that tactically and strategically, disruptive innovation is a form of design that resembles the behaviors of political and military insurgency. The behavior is not primarily rhetorical, but rather seeks to create new technical obstacles to the regime of business as usual, destabilizing incumbents rather than competing with them.

If this is true, then our organizations remain ill-prepared to innovate in the strongest sense of the word. At best, they are gaining a new vocabulary which may render them either better consumers of innovation consulting services or may start to help people imagine what would be possible if the organization were more innovative. Design as insurgency (and counterinsurgency) points to an alternative conception of innovation and design thinking as something beyond rhetorical strategies: an innovation of deeds not words.

Beyond Design Thinking and Talking

Advocacy for design thinking over the past decade has opened up new strategic vistas for design across business, government, and society. As design has migrated upstream, a dual process of diffusion spread design toolsets and mindsets among non-designers, while also dispersing designers across non-traditional application domains. Design thinking has both elevated the role of design and provided a vocabulary to enable its diffusion.

Yet the essentially rhetorical strategy of the design thinking movement has limitations. Organizations that embrace design thinking may begin to speak differently. They may even act differently, as they apply methods such as ethnography, ideation, and rapid prototyping. They may do this and nevertheless remain blissfully unaware of potential disruptions. There is a wide gulf between thinking and speaking differently within a design team, and transforming the behavior of resistant and resisting social groups such as organizations and societies. This gulf cannot be bridged by rhetoric alone.

Insurgency provides a provocative perspective from which to reframe the challenges of disruptive innovation. Design thinking views the dominance of the analytic mindset as the primary barrier to innovation in organizations. Contrast this with insurgents, who view the illegitimate ruling power as the primary barrier to realizing their cause. The ideology of the ruling party must be challenged in an insurgency, but this is just one piece of a much larger challenge. The insurgents must also engage simultaneously in armed conflict while mobilizing the support of a population. The prevailing power structure must be dismantled and replaced with a viable alternative. This requires an orchestrated campaign of mutually resonating actions, images, and words for the revolution to succeed. Disruptive innovation confronts analogous entrenched interests, which we argue can benefit from the application of insurgent strategies and tactics.

The Dynamics of Insurgency

Before we can consider innovation as insurgency, we need a brief account of the dynamics of insurgency, a term that we will use broadly to include insurrections, rebellions, guerrilla warfare, and so-called "small wars." Whereas conventional warfare occurs between nation states or coalitions of nation states, insurgency is a weapon of protest employed against a ruling government or invading power perceived as illegitimate by the insurgents.

There is a fundamental asymmetry between insurgents, who challenge the prevailing power structure, and counterinsurgents, who seek to conserve the existing power structure. Counterinsurgents begin the conflict with an asymmetric material advantage: more funding, advanced technology, better equipment, better training, and better organization. Because insurgents begin as outsiders of the existing power structure, they are materially weak, but compensate for this with an asymmetry in will: grievances against an illegitimate power provide increased motivation to fight and endure hardship.

One of the most articulate and successful proponents of guerrilla warfare was T. E. Lawrence, popularly known as Lawrence of Arabia. During the Arab revolt against the Ottoman Empire in World War I, Lawrence developed a theory of guerrilla warfare that he put into practice with dramatic effect. The prevailing theory of war espoused that the best way to secure victory was through attacking the enemy's main strength using the instrument of battle. In contrast, Lawrence argued that guerrilla campaigns should be fought as wars of detachment: "We might be a vapour, blowing where we listed. Our kingdoms lay in each man's mind, and as we wanted nothing material to live on, so perhaps we offered nothing material to the killing… We had won a province when we had taught the civilians in it to die for our ideal of freedom: the presence or absence of the enemy was a secondary matter."

Lawrence's blueprint for insurgent victory requires the following conditions. A successful rebellion needs an unassailable base or sanctuary. It must be fighting a sophisticated and disciplined alien

enemy incapable of completely occupying the disputed territory. The population must be sufficiently sympathetic to the insurgent cause to not betray their movements. There must be a small active guerrilla force with the qualities of speed and endurance, ubiquity and independence of arteries of supply, and the equipment to paralyze the enemy's lines of communications. When these conditions obtained, Lawrence believed that the insurgents could be assured of victory.

A historical analysis conducted by the RAND Corporation of 73 military insurgencies largely confirms Lawrence's theory. In the RAND study, the counterinsurgents won 38% of the time, the insurgents won 36% of the time, and 26% of cases resulted in mixed outcomes. The study identified key factors that affected the likelihood of counterinsurgent or insurgent success. Insurgents with unified, hierarchical organization do better than fragmented networks. Insurgents with a voluntarily provided sanctuary see their chances of victory rise from one in seven to almost one in two.

Insurgents do not need to be militarily strong to win. Military strength and broad terror campaigns both often backfire, by galvanizing government security forces and turning the population against the insurgents respectively. However, selected terror attacks that minimize civilian casualties can provide insurgents with a marked advantage. Insurgencies lasted 10 years on average, with insurgents less likely to win longer insurgencies. Conflicts won by insurgents were characterized by a tipping point, where a negative bandwagon effect led to an accelerated collapse of the ruling power. Population willingness to report insurgent activity and defections from one side to the other were key indicators of who was winning the conflict.

Innovation as Insurgency

In the struggle between market hegemons and disruptive innovators, design is a dangerous idea – an arsenal of weapons. The dangerous idea of design is that nothing is natural. Everything is design and, therefore, can be redesigned or innovated. This idea provides powerful ammunition for the disrupters. At first blush, it may be less obvious that design can be equally applied to counterinsurgency as insurgency: it can be put to conservative or radical ends. Yet a cursory analysis of the target audience for design thinking best-sellers, and the anecdotes they contain of Fortune-500 firms embracing design thinking, reveals which side the most well-known designers are fighting for.

Here we must caution that the interactions between disrupters and hegemons are extremely complex. It is less David vs Goliath; more of a food web. Interactions occur across actors at many different scales that defy simple categorization. Ripples of innovation continually propagate throughout the system, and all actors are altered through networks of reciprocal interaction. Disruption may be triggered by 'hegemons' even when they benefit from the status quo – think of Bell Labs, HP, IBM, Apple, or Google. Territorial conquest, invasion, and migration transfer ideas, behaviors and cultural elements across boundaries in all directions.

Conflict and competition drives the self-transformation of many actors. Disruptive innovation may be an emergent property of these conflict networks as much as it is the intentional design of an individual actor. Many innovative efforts do not have consciousness of or intention to produce disruptive consequences or outcomes, they just don't care when they do have these effects. Peer to peer network technology and open software arguably belong to this category. Even disruption that fails to achieve its intended outcomes may be successful in stimulating innovative responses in other parts of the ecosystem. To summarize, the outcomes are highly unpredictable and rarely what the

revolutionaries intended, yet the dynamics of conflict can often drive market-transforming innovation.

With this important caveat in place, what advice does the theory of insurgency provide for aspiring disrupters?

First, the disruptive innovator needs to create an asymmetric advantage in willpower. Employees and backers need reasons to commit to a dangerous and uncertain venture that go well beyond rational self-interest. They need to feel part of something greater than themselves to make the sacrifices and accept the risks inherent in disrupting entrenched interests.

Second, they need a safe haven: an unassailable base to provide stability, support, and from which to launch raids and assaults. This could be a steady revenue stream, monopoly on a niche market, or an external backer, although the latter creates dependencies.

Third, they need a loyal user base that they know intimately and from which the market incumbents are disconnected or alienated. To paraphrase Mao Tse-Tung, this community is the sea the disruptive innovator swims in. The disruptive innovator must be able to articulate the community's latent needs and mobilize their support.

Fourth, they must be capable of rapid development that surprises competitors. It is not as important that the new product / service / artifact be superior, as that it is responsive, adaptive, and relatively cheap. The asymmetry in size between incumbents and disrupters provides the disrupter with an edge in agility.

Fifth, they must be intelligence-driven. Indiscriminate junk innovation, just like indiscriminate terror attacks, will usually backfire. Likewise, mindless growth can become cancerous when it fixates on capturing market share rather than creating value. Disruptive innovation must present a constructive value proposition if it hopes to translate perturbation of the status quo into positive change.

Sixth, they must relentlessly build momentum towards the tipping point for market transformation. Early victories should be amplified by marketing campaigns. Defections of users, businesses, and employees provide indicators of success. Legacy market leaders cannot be given the time to adapt, and must be kept in a state of disorientation to accelerate their collapse.

In Threat We Dis-trust

The need for a new theoretical model of disruption arises from the inadequacy of current models to explain the phenomena of disruption. In particular, existing theories tend to ignore the relationships of power that both resist and incite disruption in the first place.

There is another, more urgent, reason that is driving our concern, namely, that a certain form of enterprise has become a threat. In the extreme case, we call the engine of such an enterprise a "killer business model". The paradigmatic example of such an enterprise can be found in the tobacco industry and the cigarette companies. Not only did these companies wilfully ignore and even conceal their knowledge of the adverse health effects of their product, but, more importantly, their profit model became inextricably bound up with the risk if not inevitability that they would be responsible for killing their own customers.

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It might seem that such examples are exceptional, but we worry that they are not. Take the global food industry, as another example, and focus in on the processed food business. There is mounting evidence that these companies, too, are powered by killer business models. On the one hand, the engineering of products that contain "weaponized" ingredients designed to have addictive effects has become not just normalized, but *de riguer*. On the other, major food processors have themselves become addicted to a model of profitability that ignores if not causes the behaviors of its customers that have led to epidemic levels of obesity, Type 2 diabetes, and host of other ills.

These businesses, initially built on promises of pleasure, convenience and the trust of their customers, have, over time, become tyrannical enterprises. Over time, these businesses have become seduced by their own power, and their ability to create wealth rather than long-term value. There are many other pathologies that seem to arise from this perversion of commerce, and most are beyond the scope of our present consideration. It is our hypothesis that when industries and businesses become tyrannical in this way, resisting regulation and government control on one side, and treating customers like a subjugated population on the other, that both the opportunity and the need for disruption arise.

Home Taping is Killing Music – And It's About Time Too!

Open source and the free software movement was the bellwether for what has become one of the most important patterns of systemic insurgency.

Napster is important, among other things, for how its adoption demonstrated the willingness of an industry to criminalize the behavior of its own customers. Of course, this is not a completely new phenomenon. The British Phonographic Industry's "Home Taping is Killing Music" slogan during the 1980s was intended to discourage home recording on cassette tapes due to fears of reduced record sales. Other replication technologies have evoked similar reactions from the powerful when their perception of control is threatened. The first to attempt to translate and print the Bible in English, including William Tyndale and John Rogers, were burned at the stake for attempting to spread the Scriptures in the common language.

BitTorrent gave insurgents an even more powerful tool, laying the infrastructure and creating design patterns that would eventually be leveraged by players like Netflix & Dropbox. Unlike Napster, the BitTorrent protocol creates distributed swarms of peer to peer transfers of file pieces, which makes it much harder to trace or block file sharing activity. The popular BitTorrent site The Pirate Bay incorporated the "Home Taping is Killing Music" logo of a cassette and crossbones onto the sail of their pirate ship logo. Like Napster, The Pirate Bay was criminalized and repeatedly attacked, fined, raided, blocked, and prosecuted. Co-founder Gottfrid Svartholm Warg is currently in jail for copyright violations. Interestingly, iTunes is likely the biggest winner of the insurgency of media sharing, proving that scale businesses can use design insurgency to capture emerging markets, even winning against the value proposition of "free."

We can observe similar patterns in other sectors. Uber has powered an insurgency in transportation by creating a double-sided market that creates new benefits by leveraging idle "inventory", optimizing service delivery and offering a platform for consumers to create more preferred experiences to get from A to B. Uber has been opposed by taxi unions and associations globally, and been ruled against in legal proceedings in countries such as Australia, Belgium, Germany, South Korea, Thailand, and the U.S. AirBnB, finally, has made it practical and pleasurable to create a home

away from home for all kinds of travellers, yet is currently illegal in many cities where it currently operates. The insurgencies created, driven by or leveraged by these new business have created disruption and threaten chaos affecting legal systems, industries and society.

Systemic Implications

One of the important consequences of our perspective is to recognize that while technological or business model innovation may be reversible, insurgencies are not. Their tendency is to grow and evolve until they have uprooted or unseated the status quo.

In some cases, we can see that a large enterprise can adapt and evolve, using an insurgent force to drive a new business model: as we have seen in the example of IBM and its adoption of open software and exit from the hardware business in favor of services, copying a model from the insurgent open source player, Red Hat. And we might ask ourselves whether a company like Coca Cola can leverage its scale and network to build a path into a post-sugar water future.

Another systemic implication of the insurgent frame is that disruption can occur even when no single actor intends to disrupt the market. Disruption can be an emergent property of the interaction between scale businesses, customers, and insurgencies. Even when no one actor is trying to destabilize the market, the dynamics of conflict, competition and cooperation can create cascading effects that transform markets. This has implications for anyone who is trying to recognize, adapt to, manage risk, or exploit market discontinuities.

We believe that while these insurgencies are often chaotic and disruptive, they can also play an adaptive role in promoting healthier business ecosystems. The outcome of any insurgency is always unpredictable. However, when markets become dominated by killer business models, there is value in shaking up the market, because it provides an opportunity to re-set the system around a less dysfunctional attractor.

This is the role of the insurgent designer. The toughest part of innovation is not the generation of new ideas. It is to irreversibly alter the power structure of the prevailing conditions. The beneficiaries of the status quo will not give up their dominant position without a fight. The designer who wants to create a better world for all stakeholders must be able to take on these vested interests and win. They must be able to start an insurgency and mobilize a population to create transformative change.

Conclusion

Design as insurgency introduces the language and methods of power into our understanding of how design is embedded in organizations and employed by organizations. In a world that is increasingly in need of systems change, the tools of systemic design are sorely wanting. The existing armament of design thinking is not up to the task. Design thinking as we know it is a rhetoric that is insufficient for shaping disruptive change because it does not address the coevolution of technology, organization and thinking in the context of established power relations.

Design as insurgency raises ethical issues for designers who must choose whether and which side to fight for. These ethical issues may be irreconcilable: the consequences of disruption are deeply unknowable, and the designer may be unable to either opt out or to provide an airtight justification for the use of coercive and subversive means. Design as insurgency raises policy issues for governments genuinely wanting to encourage innovation. It raises strategy issues for business and

entrepreneurs. It opens up new ways of shifting the currently dominant patterns of interaction in sectoral ecosystems.

By reframing design through the metaphor of insurgency, we hope to inspire acts of genuinely disruptive innovation. We are not literally suggesting or condoning the use of violence for social and economic change. Rather, we intend to provoke and empower those who are working towards discontinuous improvement within organizations and societies to rise up and challenge the dominant power structures and business models that inhibit change.