

Decoding Leadership: How Steve Jobs Transformed Apple to Spearhead a Technological Informal Economy

Howard H. Yu
IMD Business School

The number of obituaries and tributes that poured in following the death of Steve Jobs in 2011 is in stark contrast to the general public cynicism toward corporate America. Jobs was lauded as a technologist, designer, thinker, and even a visionary. This paper seeks to clarify the kind of innovation that Apple exemplifies - as a controlled platform that drastically reduces entry barriers for small hardware and software firms. The paper also investigates, from Apple's perspective, the change process by which the company transformed itself by identifying what Jobs did at different times and juxtaposing those actions with theories found in the literature in order to decode his leadership style.

As Jobs neared the end of his life, a grassroots protest movement with anarchist undertones mushroomed into mass demonstrations against Wall Street and capitalism. Ironically, right-wing critics were quick to point out that the protesters were using their iPhones and MacBooks – the epitome of capitalism – to create left-wing propaganda. Regardless of political inclination, however, people still lauded Jobs as a technologist, designer, thinker, and even a visionary, rather than seeing him as a captain of industry whose entire existence revolved around the relentless pursuit of profits. Jobs treated investors with something between ambivalence and contempt. Apple's investor relations team only shared information with Wall Street analysts and shareholders in dribs and drabs. Nor did Apple hold analyst days, routine events for most companies during which upper management presented the company's plans to several hundred investors. Yet Apple stocks continued to rise during Jobs' reign after he returned to Cupertino in 1997. On August 9, 2011, Apple overtook ExxonMobil as the most valuable company in the world, worth \$342 billion.

Through Apple, Jobs profoundly shaped how consumers interacted with technology and more importantly, created an ecosystem that allowed other entrepreneurs to thrive.

By seizing the intersection between art, technology and business, and channeling Apple to reflect that, Jobs reconceptualized how the consumer electronics industry should be organized and brought on board numerous start-ups to develop applications. In the process, he brought about an unprecedented rate of innovation – innovation that at times appeared to have exceeded his original vision.

The purpose of this paper is to clarify the kind of innovation that Apple exemplifies – as a controlled platform that drastically reduces entry barriers for small hardware and software firms. In doing so, Apple successfully cultivated a technological informal economy. Second, the paper investigates, from Apple's perspective, the change process by which the company transformed itself. The purpose here is not to provide a blow by blow account of different managerial actions undertaken by senior executives. For a historical description of Apple's corporate development, a handful of sources are available (e.g. Moritz, 2009; Price, 2008; Deutschman, 2000; Lashinsky, 2012; Isaacson, 2011). Rather, the main thrust is to identify what Jobs did at different times and to juxtapose those actions with theories found in the literature in order to decode his leadership style. This essay thus forms a blueprint for others to try to replicate Apple's success, bearing in mind that Jobs remains a rare example in contemporary business history. In other words, this paper seeks to provide a theory that describes the underlying strategy process that other firms can emulate.

Transformation of the Industry

The term *informal* economy refers to “commercial activities that occur at least partially outside a governing body's observation, taxation, and regulation” (Ireland, 2011). Here this definition will focus on the activities of members of the technological community that lie outside the direct purview of the system designer. In context, Apple was the system designer. It provided infrastructure and rules that brought together groups of users and developers on a multi-sided platform. Related parties thriving within Apple's ecosystem included hardware manufacturers (e.g., Intel, Samsung, Toshiba, and Foxconn); application developers (e.g., Zynga – maker of FarmVille; Rovio – maker of Angry Birds; and the music streaming service provider Spotify); music labels (e.g., Sony, BMG, and EMI); and end users. Some application developers went on to build sizable businesses – based on Apple's platform – selling imaginary things, like tractors that plow farms in mobile games. These “virtual goods” mushroomed into a \$9 billion industry in 2011 alone, a global phenomenon that no system designer, including Apple, could have foreseen.

Even so, critics described Apple's ecosystem as akin to a carefully curated and gated community garden. Apple provided an open apps platform for outside developers that wanted to create software and content, but it was very controlled. Developers complained that the approval process for getting an app into Apple's App Store was opaque, but they continued submitting applications. By late 2011, the App Store offered half a million apps and Apple had paid developers \$3 billion in sales revenue over three years. In spite of its draconian approach, Apple managed to cultivate the first and biggest multi-sided platform in the mobile space. In doing so, it elevated smartphones to much more than ordinary communication devices. Consumers could

now use them to access the internet and perform many other tasks previously only possible on PCs. At the time of writing, Windows Mobile, Nokia Symbian, and RIM BlackBerry operating systems were trailing far behind the Apple iOS mobile operating system. The only meaningful competitor was Google Android. But Apple's recognition of the important role of third-party developers in enriching user experience was a relatively recent phenomenon. It was only when Apple transformed from a niche computer maker focusing on advanced functionality, reliability, and ease of use for technical enthusiasts into a global electronic powerhouse bringing aesthetics and fashion in product design to mass consumers that the company became increasingly open in the design of its products. The magnitude of transformation inside Apple is as fundamental as that of the industry that Apple has been in and still is transforming.

Transformation at Apple

In the early days, Apple typically designed its computers from scratch, using unique chips, disk drives, and monitors, proprietary operating systems, and many specially designed peripherals (Yoffie & Slind, 2008). This created the type of tight vertical integration between application software, operating system, and hardware devices that Jobs liked. Because of his desire for end-to-end control, Jobs also vehemently opposed proposals that Apple license the Macintosh operating system to other office equipment manufacturers and allow them to make Macintosh clones – something that happened after he was forced out of the company in 1985. Upon his return to Apple, he made eradicating the Macintosh clones a priority. When a new version of the Mac operating system shipped in July 1997, weeks after CEO Gil Amelio was ousted, Jobs did not allow the clone makers to upgrade to it and terminated their licenses altogether. “It was the dumbest thing in the world to let companies making crappier hardware use our operating system and cut into our sales,” he later said (Lashinsky, 2012). Apple thus designed and built machines that were not compatible with others, unlike Microsoft, which profited from a world in which different companies made machines that were interchangeable, ran a standard operating system and could all use the same software applications (such as Microsoft's Word and Excel). Apple managers were trained to believe in the primacy of owning and controlling the main technologies behind the products that they built. Consistent with Apple's own “Think Different” marketing campaign and its iconic “1984” TV commercial, relying on outside vendors for undifferentiated, off-the-shelf solutions was simply not acceptable.

Yet the absolutely insulated approach came to an end once Apple started making music-playing devices. When Apple first introduced the iPod in October 2001, the project was set to meet an impossibly short schedule imposed top-down by Jobs. To meet the project deadline, Jon Rubinstein – then the head of hardware – had to swiftly assemble an engineering team that focused on integrating third-party, standardized components into a small package (Young & Simon, 2005). The time constraint set by Jobs forced the iPod project team to experiment with a new engineering approach that delivered the required product features not just on time, but also at a much lower cost and with virtually no upfront investment in product development. This was a critical condition in order to profit from an inexpensive music-playing device with a much shorter product life cycle

and considerably lower profit margins than Macintosh computers.

Besides controlling the project schedule, Jobs continued to stay close during project implementation. Colleagues reported that the CEO would be “horribly offended [if] he couldn’t get to the song he wanted in less than three pushes of a button” (Kahney, 2004). More importantly, the prime differentiation of an iPod was not the physical design of the device but its complementary offering – iTunes. Jobs reportedly insisted that the iTunes user interface be modeled on Palm’s HotSync software so that the iPod could transfer songs seamlessly from iTunes (Kahney, 2008; Levy, 2006). A year later, while the product team was busy releasing the Windows-compatible iPod, Jobs became the first person to persuade all major record labels to make their music available online. To achieve the 99-cents-per-song pricing scheme, he personally conducted early demonstrations of iTunes to top executives and leading artists in the industry. In doing so, Apple offered the record labels a solution to the problem of music piracy by creating an easy-to-use, legitimate online marketplace. Tellingly, Apple allowed record labels to capture most of the online revenue (close to 80%) from music sales. Rather than treating iTunes as a separate business with the requirement to generate lucrative profits, iTunes is positioned internally as a basic infrastructure in which Apple must invest in order to allow the company to become a platform architect.

The platform strategy – developing tools to allow third parties to distribute their products or services more effectively to end consumers – became increasingly apparent as Apple ventured into the mobile phone and tablet businesses. That explicit recognition of the positive contribution of outside developers, however, was in sharp contrast to some of Apple’s long-held beliefs. Historically, Apple’s well-regarded Macintosh operating system had always commanded a price premium from consumers. When it launched the Mac, Apple also tried to extract profits from developers, charging third-party developers \$10,000 for the software development kits (SDKs) required to create Macintosh applications. By contrast, Microsoft gave Windows SDKs away. Consequently, by the time of Microsoft’s antitrust trial in 1998, Windows had six times as many applications as Macintosh. This made Windows far more attractive to consumers, despite its functional shortcomings.

What we observed, therefore, was the continuous adaption in Apple’s fundamental beliefs as the firm transformed from a niche computer manufacturer which had targeted a narrow audience with a strong emphasis on engineering ingenuity, into a consumer electronics powerhouse that was thoroughly mainstream in its product offerings and attracted mass consumers. When Apple unveiled the first iPhone in January 2007, other manufacturers such as RIM, Nokia, and Palm had already perfected smartphone technologies that enabled end users to receive emails and go online using their mobile devices. Although iPhone’s exclusive touchscreen design attracted much attention from the general public, the lack of a physical keypad also drew serious doubts from industry critics. The “radical design” was not even the first. HTC, a Taiwanese competitor, managed to launch a keyboard-less smartphone two weeks ahead of Apple. What sustained iPhone’s differentiation against other competitors was the “App Store.” By providing SDKs at a very low cost to independent software developers – a radical departure from Apple’s former practices – the company became a platform architect, retreating from its former proprietary product strategy. Through its App Store and

mobile devices, Apple fostered the development of something that soon became the largest mobile app marketplace.

Perhaps most interestingly, as the tablet business took off, independent developers created many applications that targeted large enterprises and established companies – a segment in which Apple showed little initial interest. For years, Apple had virtually ignored the enterprise sector and did not have a sales team to service businesses. Jobs had famously justified the approach by saying that Apple preferred to sell to end users, not IT managers. It was only recently that Jobs' successor – Tim Cook – formally recognized the importance of this “secondary” market and said that Apple would pay closer attention to the needs of large enterprises.

The example of Apple therefore demonstrates the advantage of cultivating a technological informal community around the company's core platform. The community members are not only indispensable in fulfilling the existing product-market strategy, they also play a critical role in the company's future evolution, enhancing the adaptability of the organization as a whole (Burgelman, 2002). Thanks to the independent developers that created business applications, office employees persuaded their employers to buy iPads and iPhones. Apple has claimed that 92% of Fortune 500 companies are currently testing or deploying iPads, as if Apple had invested major effort in selling its products to information systems professionals.

Strategy Process

How can sense be made of Jobs' managerial actions in leading the transformation at Apple, which also transformed the industry? While Jobs was reported to have been the classic narcissistic CEO, what was the functional role in his top-down intervention? More importantly, how can this be reconciled with the literature, which emphasized a bottom-up, emergent process as the dominant mode for continuous change within a large established organization?

Numerous in-depth field studies revealed that most strategic initiatives are driven from the bottom up in the company's internal resource allocation process (e.g. Bower & Gilbert, 2005). Operating managers, in response to discrepancies between what they actually achieved and what they were asked to achieve or believed they could achieve (e.g., production capacity shortages, or potential market opportunities), defined detailed specifics of project proposals in order to resolve the perceived discrepancies. Out of the many proposals being championed, general managers in the middle (division or group executives) provided further impetus to those that they perceived to be the most promising, and in the process, commit their credibility and influence. Because they are the last executives with close knowledge of the businesses and their managers, their decisions as to which initiatives to select or ignore determine what gets funded. As a consequence, sponsorship and the pattern of execution dictated what actually happened, not strategy studies or top management pronouncements. Before an initiative received formal approval at the corporate level, the multi-level process of selection already occurred. The realized strategy was fundamentally determined by the definition and selection processes deep in the operating and integrating levels of the company.

The resultant effect of the bottom-up process was deemed to be so powerful

that some scholars adopt an intra-organizational, ecological perspective (Burgelman, 1991), viewing changes as the result of a continuous process of variation, selection, and retention of strategic initiatives that occurred within an organization (Miner, 1990; Galunic & Weeks, 2002). Lower-level managers were seen as champions of change, while top management only recognized (ex-post) the occurrence of fortuitous events that set the company on a successful course (Burgelman, 1991). Because formal structures and administrative systems defined the “rules of the game” among managers across levels and functions and exerted critical influences on day-to-day decision making, the main lever for top management was primarily in designing and maintaining elements within the formal structures of the company so that necessary changes could be brought forward by managers from the lower ranks (Burgelman, 1994, 2002), not in directly evaluating the technical details of every project proposal (Thompson, 1967; Mintzberg & Waters, 1985). The role of top management in strategic change was mostly to be “willing enough to recognize strategically bottom-up initiatives and capitalize on them rather than pass them by” (Noda & Bower, 1996, p. 188). The lever of influence available to top management remained indirect, such as manipulating the organizational perception of external threats (e.g., Gilbert, 2005) and/or establishing structural autonomy (e.g., Christensen, 1997).

This notion that top executives set a general vision and endorse strategic plans but do little to define the substantive content of individual initiatives contradicted what could be observed at Apple, as well as other accounts by business historians. Business historians have documented instances where top management “micro-managed” business development to ensure the correct implementation of its original vision (Rosenbloom, 2000; Jones, 2005; Tedlow, 2006). Top management was observed to interact directly with lower-level managers concerning the substance of specific operational details of strategic initiatives critical to an organization in a changing environment. Repeatedly, chief executives are shown to be much more involved in the day-to-day operations of their firms than previous research implied. A few exceptional studies also suggested that, in a turbulent environment, the active involvement of a strong CEO in driving strategic change is crucial (Bourgeois & Eisenhardt, 1988; Eisenmann & Bower, 2000). The critical question thus arises: How can one understand Steve Jobs’ managerial behavior beyond simply egotistical meddling and view it as purposeful intervention that overcame organizational inertia and promoted Apple’s long-term adaptation? Or, to put it more simply, what was the functional role of Jobs’ micro-management?

While Jobs was the major force in spearheading changes at Apple, his involvement could be categorized into different classes of managerial actions. Importantly, each class of action could be further mapped to existing theories in the literature that predicted the different kinds of resultant development in an organization. Such mapping, in other words, effectively decoded Jobs’ leadership into three discrete processes that other firms could have potentially replicated, albeit without an extraordinary figure like Jobs himself: strategic visioning, overcoming internal resistance, and sustaining change momentum.

Strategic visioning. While Jobs is widely recognized as having been a visionary technologist, breakthrough thinking in product design can also be achieved through rigorous methodologies. As design firm IDEO repeatedly demonstrated (Sutton &

Hargadon, 1996; Hargadon & Sutton, 1997), when designers adhere to a cohesive set of simple rules, group members become capable of delivering radical innovation. IDEO's CEO Tom Kelley, author of *The Art of Innovation*, wrote that "the Anthropologist's role is the single biggest source of innovation at IDEO" (Kelley, 2005, p. 16). When companies find out what their customers hidden needs are by observing them – whether by chance, immersion or video – they can gain invaluable insights. Kelley reported that when Oral-B asked IDEO to design a new kids' toothbrush, they went into people's homes to watch kids brush their teeth. It observed that kids' toothbrushes were just smaller versions of adult toothbrushes and, because the kids lacked the dexterity of their parents, were difficult to hold and maneuver. This led to an innovative design: short, fat, softer toothbrushes that were easier for kids to manipulate (Dyer et al., 2011).

Christens et al. (2006) also described how segmenting markets along lines defined by the characteristics of products (category or price) or customers (age, gender, marital status, and income level) were poor indicators of customer behavior because that was not how markets are structured from the customers' perspective. During traditional market research and segmentation, the situational needs for which customers are looking to "hire" products or services go unnoticed. Christensen et al. (2006) advocated ethnographic product conceptualization, which moved away from traditional large-scale market research in order to conceptualize "killer app" products. When P&G came to design firm Continuum hoping to revitalize its household cleaning division, the Continuum designers did not begin with chemical molecules. They did not spend time in the lab thinking about the chemistry of soap. Instead, they visited people at home and watched dozens of them engage in the tedious task of floor cleaning. The designers took detailed notes on the vacuuming of carpets and the sweeping of kitchens. They set up video cameras in living rooms. When the Continuum team analyzed the videotapes, they found that people spent more time cleaning their mops than they did cleaning the floors; the tool made the task more difficult. Out of this realization, the Continuum team worked to invent a cleaner that people could throw away. No more cleaning mop heads, no more buckets of dirty water. The idea of a "tissue on a stick" became the famous Swiffer launched in 1999. Today, Swiffer is generating more than half a billion dollars in sales in fifteen countries (Continuum, 2013).

Such an approach to new product development coincided with the genesis of most Apple products. Not reader surveys. Not competitive analyses. "When we first started Apple we really built the first computer because we wanted one," Jobs told Michael Moritz in the early 1980s for the book *The Little Kingdom*. Moritz (2009) further wrote, "He was unwilling to let product planning become burdened with analysis, focus groups, decision trees, the shift of the bell curve, or any of the painful drudgery he associated with large companies." It is astounding how little has changed philosophically at Apple from its earliest days to the present. The iPhone is a classic case in point. Before the device was introduced, Apple executives typically hated their smartphones. "That's why we decided to do our own," Jobs said in an explanation (Lashinsky, 2006).

Overcoming internal resistance. As described above, Jobs regularly carried out overbearing, top-down interventions. Most radical perhaps was when he convinced the iPod division to take away much of what had made an iPod great – the display, the large storage space, the wheel, and the menu-driven interface – to launch the iPod

Shuffle in 2005 (Levy, 2006). Later, in anticipation of the company's changing product mix when Apple expanded its direct presence in retail distribution, the CEO personally handpicked a former executive from Target and challenged the new team to model high-end boutiques – a brilliant move in hindsight, especially since the first Apple Store was opened in 2006 when Dell's online sales approach was still being hailed as the best practice for the computer industry (Thomke & Feinberg, 2012). By 2007, more than 100 million iPods had been sold, accounting for almost half of Apple's revenues.

This kind of top-down intervention differed from formulating strategy and shaping resource allocation. Rather, Jobs repeatedly ignored the company's current formal design and measurement systems to define specific objectives for new initiatives: personally champion these initiatives and maintain a strong presence throughout implementation. In doing so, existing routines embedded in the informal structure of the organization (Homans, 1950) were overturned. A new way of behaving across levels and functions was instilled. Jobs' involvement was heavy, and targeted with fine-grained and technical specifics, from the stage of project initiation well into final implementation of the selected initiatives.

Conceptually, Jobs overrode any obstacles imposed by particular aspects of the existing context of the organization that might delay or distort progress or learning. Since he expressed the performance aspiration in terms of concrete technical specifics, it avoided the perceptions, judgments, and biases of mid- and low-level managers, skipping the conflict-ridden processes of resource competition, and protecting the original vision of the strategic initiative – even when it contradicted the firm's tradition. The operating requirements imposed top-down forced lower-level managers to forgo existing problem solving routines, which made achieving the desired level of performance difficult. The discrepancy between the imposed level of aspiration and the current level of achievement, as a new performance gap, created enough dissatisfaction to induce the project team to engage in distant search activities. Along with additional resources that had been made available, the new performance gap freed the project team from the company's past performance history when it looked for technical solutions as well as other non-financial resources outside the organization (c.f., Cyert & March, 1963; Levinthal & March, 1981).

More importantly, the continuous impetus provided by the CEO in fulfilling the original project definition superseded the existing patterns of interaction among managers. Because the strategic initiative provided legitimacy for potential new arrangements, lower-level managers ceased to automatically re-enact the previous pattern of interaction. In effect, the organization engaged in ad hoc problem-solving across multiple levels all the way to implementation and stopped exercising existing repertoires of performance programs that restricted or simplified information-processing. A forward-looking logic of consequence replaced the experience-based logic of appropriateness (March & Olsen, 1989; Gavetti & Levinthal, 2000). As individual actors experienced new ways of interacting, it created the opportunity to dislodge the existing communication pattern, power distribution, and social status among subunits. A new pattern of interaction among managers thus emerged. Evidently, status at Apple fluctuated with the prominence of the products on which one worked. As the success of the iPhone and iPad grew, the coolest faction of the

company was software engineers working on Apple's iOS mobile operating system software. Hardware engineers and product marketers connected with the devices ranked high in the pecking order, followed by people in the iTunes, iCloud, and other online services organizations. Employees associated primarily with the Macintosh, once considered the ultimate product, were considered second-rate in the Apple hierarchy by this time (Lashinsky, 2012).

Projects that Steve Jobs personally managed did not necessarily require "bet-the-company"-sized resources, for which the CEO would absorb career risks that individual mid-level general managers would shun (Eisenmann & Bower, 2000). Rather, it was the substantive content of the strategic initiative that created a deliberate "stretch" that pushed the company to engage in experiential learning that it otherwise would not do.

Sustaining change momentum. One year after the successful introduction of the first iPod, Jobs eventually created a separate iPod division, appointing Jon Rubinstein, the former head of hardware, to take over the iPod and music operations (Young & Simon, 2005). Because the existing formal structures of the company had only been bypassed but not destroyed, when the strategic initiative was launched, Jobs could experiment with a new strategy before deciding to commit further to any irrevocable choices. Whether Jobs' actions were the result of careful deliberation or his personal intuition is a different question. Here, we are interested in the organizational consequences and those corresponding processes. In short, such top-down interventions made it possible to introduce changes in the informal organization of the company before reinforcing the desired behaviors through the elements of formal organization – the opposite of what underpins the majority of literature on organizational design. Generally speaking, top management can seize on early successes to remap the current elements of the formal structures to reflect new behaviors that are required to sustain the momentum. By institutionalizing these behavioral changes through formal administrative mechanisms, top managers are again released from the burden of continuous involvement in operational details.

Conclusions

As iconic as Steve Jobs was, a close examination of his managerial actions reveals the different processes that constituted his leadership. On the one hand, it is inspiring for other companies to know that they might be able to replicate Apple's success by following the different processes that Jobs embarked on in various circumstances. On the other hand, such a realization also suggests that Jobs was truly a rare corporate leader who was capable of integrating and driving these diverse processes from the apex of the organization.

More interesting, perhaps, is the question of how much technical knowledge a top manager must possess before he/she can successfully carry out the kind of top-down intervention Jobs achieved. Can a new CEO from outside the company ever engage in this level of intervention? What happens if top management provides the wrong content? Will this lead the company to prematurely abandon the strategic initiative, to irrationally escalate its organizational commitment, or to pragmatically redefine its content during the next rounds of review? These are some of the questions that go

beyond what a single paper can answer.

In the spirit of exploring new settings that allow further refinement of the emerging theories that have been presented, consider the following two high-profile examples, which help illustrate the high potential for future research in this area.

When IBM developed the revolutionary System/360 in the early 1960s, the goals of handling business and scientific applications as well as standardizing interfaces for peripheral equipment required IBM to spend more than ten times its annual budget on programming. To cope with the enormous challenge, CEO Thomas J. Watson, Jr. invited eight top executives to his ski lodge for a three-day session on programming. Going through considerable technical details, the team devised an operating system that would schedule the computers to work at their full capacity without any manual interruption. To speed up program development and make space in an excessively crowded agenda, Watson also abolished the corporate management committee – a group of top executives functioning as policy makers (Wise, 1966a, 1966b).

Sony's first version of the popular Walkman was a "special-order toy" made for internal use. But when CEO Akio Morita saw it, he declared that the company should bring it to the market at an affordable price and target young consumers. The project bypassed Sony's conventional processes with no market testing and was scheduled to be launched before the summer holiday. Given the project targets, engineers used low-end components and encased the player in a small, stylish package. Morita also added a twin output that allowed two people to listen at the same time. The CEO himself directed the marketing campaign, which did not involve a regular press release. Instead, Sony arranged bus tours with actors posing with the Walkman while reporters listened to a recorded tour. Young people were hired to walk through Tokyo, offering passersby the chance to try out the new product (Nathan, 1999).

In the field of organizational theories where carriers of change are often reduced to abstract ideas such as routines, capabilities, knowledge, and information flow, the development of a more manager-centered theory could prove to be an important contribution. This paper will ideally open new paths of inquiry into strategic change in complex organizations.

References

- Academy of Management. (2011). 2012 Program Theme: The Informal Economy. *Academy of Management 2012 Annual Meeting Overview*.
- Bourgeois, L.J. & Eisenhardt, K.M. (1988). Strategic Decision Processes in High Velocity Environments: Four Cases in the Microcomputer Industry. *Management Science*, 34(7): 816-835.
- Bower, J.L. & Gilbert, C.G. (Eds.). (2005). *From Resource Allocation to Strategy*. Oxford: New York, NY: Oxford University Press.
- Burgelman, R.A. (1991). Intraorganizational Ecology of Strategy Making and Organizational Adaptation: Theory and Field Research. *Organization Science*, 2(3): 239-262.
- Burgelman, R.A. (1994). Fading Memories: A Process Theory of Strategic Business Exit in Dynamic Environments. *Administrative Science Quarterly*, 39(1): 24-56.

- Burgelman, R.A. (2002). Strategy as Vector and the Inertia of Coevolutionary Lock-In. *Administrative Science Quarterly*, 47(2): 325-357.
- Christensen, C. (1997). *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail*. Boston, MA: Harvard Business School Press.
- Christensen, C.M., Anthony, S.D., Berstell, G. & Nitterhouse, D. (2007). Finding the Right Job for Your Product. *MIT Sloan Management Review*, 48(3): 38-47.
- Continuum. (2013). Swiffer: A Game-Changing Home Product. *Continuuminnovation.com/work/swiffer*, 18 May.
- Cyert, R.M. & March, J.G. (1963). *A Behavioral Theory of the Firm* (2nd ed.). Cambridge, MA: Blackwell Business.
- Deutschman, A. (2000). *The Second Coming of Steve Jobs*. New York, NY: Broadway Books.
- Dyer, J., Gregersen, H.B. & Christensen, C.M. (2011). *The Innovator's DNA: Mastering the Five Skills of Disruptive Innovators*. Boston, MA: Harvard Business Press.
- Eisenmann, T.R. & Bower, J.L. (2000). The Entrepreneurial M-form: Strategic Integration in Global Media Firms. *Organization Science*, 11(3, Special Issue: Cultural Industries: Learning from Evolving Organizational Practices): 348-355.
- Galunic, D.C. & Weeks, J.R. (2002). Intraorganizational Ecology. In Baum, J.A.C. (Ed.), *Blackwell Companion to Organizations*, 75-97. Malden, MA: Blackwell Publishers.
- Gavetti, G. & Levinthal, D. (2000). Looking Forward and Looking Backward: Cognitive and Experiential Search. *Administrative Science Quarterly*, 45(1): 113-137.
- Gilbert, C.G. (2005). Unbundling the Structure of Inertia: Resource Versus Routine Rigidity. *Academy of Management Journal*, 48(5): 741-763.
- Hargadon, A.B. & Bechky, B.A. (2006). When Collections of Creatives Become Creative Collectives: A Field Study of Problem Solving at Work. *Organization Science*, 17: 484-500.
- Hargadon, A.B. & Sutton, R. (1997). Technology Brokering and Innovation in a Product Development Firm. *Administrative Science Quarterly*, 42(4): 716-749.
- Homans, G.C. (1950). *The Human Group*. New York, NY: Harcourt, Brace.
- Ireland, R.D. (2011). 2012 Program Theme: The Informal Economy. *Academy of Management 2012 Annual Meeting Overview*.
- Isaacson, W. (2011). *Steve Jobs*. New York, NY: Simon & Schuster.
- Jones, G. (2005). *Renewing Unilever: Transformation and Tradition*. Oxford & New York: Oxford University Press.
- Kahney, L. (2004). (July 21, 2004). *Inside Look at Birth of the iPod*. In Wired. Retrieved October 10, 2012, from <http://www.wired.com/gadgets/mac/news/2004/07/64286?currentPage=all>.
- Kahney, L. (2008). *Inside Steve's Brain*. New York, NY: Portfolio.
- Kelley, T. (2005). *The Art of Innovation*. New York, NY: Doubleday.
- Lashinsky, A. (2012). *Inside Apple: How America's Most Admired – and Secretive – Company Really Works*. London: John Murray.
- Levinthal, D. & March, J.G. (1981). A Model of Adaptive Organizational Search. *Journal of Economic Behavior & Organization*, 2(4): 307-333.
- Levy, S. (2006). *The Perfect Thing: How the iPod Shuffles Commerce, Culture, and Coolness*. New York, NY: Simon & Schuster.
- March, J.G. & Olsen, J. (1989). *Rediscovering Institutions: The Organizational Basis of*

- Politics*. New York, NY: Free Press.
- Miner, A.S. (1990). Structural Evolution Through Idiosyncratic Jobs: The Potential For Unplanned Learning. *Organization Science*, 1(2): 195-210.
- Mintzberg, H. & Waters, J.A. (1985). Of Strategies, Deliberate and Emergent. *Strategic Management Journal*, 6(3): 257-272.
- Moritz, M. (2009). *Return to the Little Kingdom: Steve Jobs, the Creation of Apple, and How It Changed the World*. New York, NY: Overlook Press.
- Nathan, J. (1999). *Sony: The Private Life*. New York, NY: Houghton-Mifflin.
- Noda, T. & Bower, J.L. (1996). Strategy Making as Iterated Process of Resource Allocation. *Strategic Management Journal*, 17(7): 159-192.
- Price, D.A. (2008). *The Pixar Touch: The Making of a Company*. New York, NY: Alfred A. Knopf.
- Rosenbloom, R.S. (2000). Leadership, Capabilities, and Technological Change: The Transformation of NCR in the Electronic Era. *Strategic Management Journal*, 21: 1083-1103.
- Sutton, R. & Hargadon, A.B. (1996). Brainstorming Groups in Context: Effectiveness in a Product Design Firm. *Administrative Science Quarterly*, 41(4): 685-718.
- Tedlow, R.S. (2006). *Andy Grove: The Life and Times of an American*. New York, NY: Portfolio.
- Thomke, S.H. & Feinberg, B. (2012). Design Thinking and Innovation at Apple. Harvard Business School Case, 609-066.
- Thompson, J.D. (1967). *Organizations in Action: Social Science Bases of Administrative Theory*. New York: McGraw-Hill.
- Wise, T. A. (1966a). IBM's \$5,000,000,000 Gamble. *Fortune* 74, September.
- Wise, T. A. (1966b). The Rocky Road to the Marketplace. *Fortune* 75, October.
- Yoffie, D.B. & Slind, M. (2008). Apple Inc., 2008. Harvard Business School Case, 708-480.
- Young, J.S. & Simon, W.L. (2005). *Icon: Steve Jobs, the Greatest Second Act in the History of Business*. Hoboken, NJ: Wiley.