

Barbarians or Bureaucrats: Examining the Shift from Design Policy to Strategy in E-Business Innovation

“Design [practice] has become complicated because of ... convergences of objects, services, environments, and technologies, so that more and more design problems can only be solved by teams from different backgrounds working together.”—Bill Moggridge, IDEO co-founder (Wohlfarth, 2002)

“A designer can be both design-driven and market-driven. It is possible to create museum-caliber art, meet business objectives and enhance the user’s experience all at the same time.”—Robert Brunner, Apple Industrial Design Group former director (Kunkel, 1997)

Introduction

Often caught within the complexities of e-business software innovation, a designer may feel at odds trying to propagate a healthy balance of user experience value while serving personal goals as well as the corporate agenda, whether it’s coordination, enforcement, and so forth. Delivering this value involves playing multiple roles, with limited resources. Underscoring these tensions of design practice is the popular question, “What is the role, place, and identity of design as the organization confronts emerging demands?” Proposed answers often point to structural patterns of design activity (e.g., consultant or in-house) or ideals of interdisciplinary practice (e.g., user-centered design). Perhaps by shifting the question to focus on the proper *alignment* between a designer’s *attitude* and the sponsoring organization’s *lifecycle*, an opportunity to enrich design understanding arises. In addition to optimal fulfillment of design potential and resource allocation, there may be new thematic connections across real situations to inform the design leadership community and corporate partners. Ultimately, the benefit of exploring this issue is found in the need to support design managers so they can create the most favorable conditions for creativity.

Goals and Approach

This working paper proposes a model for interpreting and defining the relationship between the individual designer’s attitude and the sponsoring organization’s position along its growth curve. “Attitude” refers to the sense of identity that characterizes a designer’s persona in the organization. This framework is derived from a comparison of two design organizations within e-business software, which suggests certain factors that may determine how to properly align a design attitude to a situation. After describing each factor, I offer future next steps for elaborating and validating the model. The intended outcome of this paper is to set the stage for ongoing constructive dialogue to deepen our understanding of how to enhance creative conditions within “wickedly” problematic environments of practice, in e-business and beyond.

E-business: More than just websites!

Contrary to popular belief, “e-business” is not about the trendiest, most profitable websites, although they do contribute to the “e-commerce” aspect that attracts media coverage. Instead, e-business refers to a massive cultural and technological phenomenon, often associated with Silicon Valley, but global in scope and impact. It signals the “the complex fusion of business processes, enterprise applications, and organizational structures to create a high performance business model...without which, e-commerce cannot be executed effectively” (Kalakota and Robinson, 1999). This has become the engine of modern business, centered on driving flows of information in empowering and cost-effective ways. Subsequently, new kinds of value are created for customers, partners, suppliers, and employees. Delivering that value as part of a user experience package is the primary challenge for designers today. Thus, the designer’s duties involve serving as a user interface analyst or information architect (among other titles), mapping user requirements to useful, usable taskflows and functions for software packages, such as “Customer Relationship Management” (CRM) or “Enterprise Resource Planning” (ERP) that automate core business operations: financials, human resources, or manufacturing.

A Tale of Two Firms: A baseline comparison¹

What follows is a look at two e-business software firms that employ design differently, from the position of a strategic pioneer to a policymaking authority. Before continuing, it is worth briefly noting 20th century pragmatist philosopher John Dewey’s notion of “environment”—*the “sustaining or frustrating” conditions that define the activities of a person, such as the tools, spaces, materials, or other people* (Dewey, 1980). There is an active relationship of growth and renewal, with a distinguishable structure and pattern, found in a rhythmic “doing and undergoing” (Dewey, 1980). Knowing this is key to perceiving the nearly symbiotic bond between a designer and her sponsoring organization.

Accelerating the Design Vision

BEA Systems, Inc. is a relatively young software firm that provides a highly sophisticated enterprise software foundation, dubbed *WebLogic Platform*, for creating the infrastructure for web-enabled systems in financials, telecom, and other markets. Design was just introduced about three years ago, resulting in a “user experience program manager” position to serve as the lead designer and functional expert of one of the flagship products. This involves tactical interface design as well as strategic platform analysis.

¹ These observations and interpretations are drawn from personal experience, so as to enrich our understanding of the complexities of design as an organizational competency. No value judgment is implied by any characterization.

Being new to the user experience side of e-business, BEA has no established design department or standards, although legacy designs from prior versions resulted in style guides that provide some historical context. The designer is embedded directly in the product team, exposed to and expected to interact with engineers and managers on design issues, as well as development cycle planning and bug reporting. Thus, the design goal overall is to initiate and anticipate a full user experience agenda for the flagship product, extending to the platform (whose teams are geographically dispersed). *The designer is expected to assume a leadership role in defining the vision, driving the design decisions, and building savvy relationships with customer-facing representatives, while applying UCD (User-Centered Design) principles in a loose structure to frame the velocity-oriented change/development cycles.* The environment is one of “thriving on chaos”, quickly iterating within aggressive timeframes dictated by engineering, while pursuing strong functional innovations for competitive value. A minor escalation structure is in place, with emphasis on command and control at individual contributor levels.

Summary and Challenge

Here design is pursued as a matter of executing a forward-oriented agenda for the central product and platform overall, supporting levels of innovation, as a competitive advantage. A confidence-oriented management style encourages the designer to take initiative in creating solutions while contending with bold deadlines. This entails an attitude akin to a “barbarian” conquering constant uncertainty and predicament, while plotting a course for the product team and wrestling with an engineering-driven culture. Thus, the challenge for this young firm is learning to temper the chaos and velocity, towards organizational maturity, while preserving an innovative, entrepreneurial spirit. There is high risk of “burnout” of the design competency unless supportive processes and resources are in place to stabilize the environment.

Standardizing Policies for Design Unity

Oracle Corporation first gained prominence with relational databases, expanding its influence with web-based enterprise applications and integrated software suites. The Oracle UI (Usability and Interface) Group was founded ten years ago to serve as the chief design body legislating company-wide guidelines for user interface styles and interactions driving most web-based and desktop applications, totaling over a 100 products. Encompassing psychologists, designers, and computer scientists, the group is divided into teams addressing areas like applications, database, and business intelligence. An institutionalized UCD process is advocated, with mandatory reviews and documented scorecards (Rosenberg and Gajendar, 2004).

Dedicated to maximizing design efficiencies in support of company-wide adherence to benchmarked designs, the UI Group is run as a centralized consulting group, with a firmly established political structure for escalating critical design issues. *Assigned to various product teams, the designers function as legislators and administrators of the standards, interpreting, facilitating, mediating, and translating guidelines in support of functional requirements from product teams.* Proposed changes to guidelines are channeled to appropriate oversight persons to ensure consistency with prior designs and ever-changing technologies. This emphasizes a cautious, steady approach of examining “concentric rings” of impact (pageflow interactions to atomic components) suitable for the wide array of products and teams that can be impacted by a single change (Beier and Vaughan, 2003).

Summary and Challenge

In this case, design is applied in a policymaking capacity, providing the governing standards to ensure harmony among a diverse line of products. When creating integrated suites of complex software, this is understandably crucial. Thus, the environment is vigilant and managerial, with risk-averse caution to radical changes. Preference is towards solutions predicted by the standards, enabling low-error, cost-efficient implementation. Consequently, the designer functions as an enforcer or “bureaucrat” persisting standards to ensure procedural compliancy across a massive product portfolio, and unity of design style. The UI Group’s lifecycle seems tending toward late-stage maturation, as a firmly stabilized department with high-profile corporate presence. Therefore, the challenge is to invigorate creativity and inventiveness, in order to stave off encroaching complacency that may miss novel (and competitive) design opportunities.

A Hypothetical Model for Consideration

From this comparison of two distinctly unlike design situations, we can extrapolate certain common factors that influence the emergence of design attitudes and cultural relationships to an organization. Indeed an organization could shift from one to another through its life cycle. These factors certainly extend and apply to situations beyond e-business software development, to any place design is practiced. Figure 1 below illustrates the key factors.

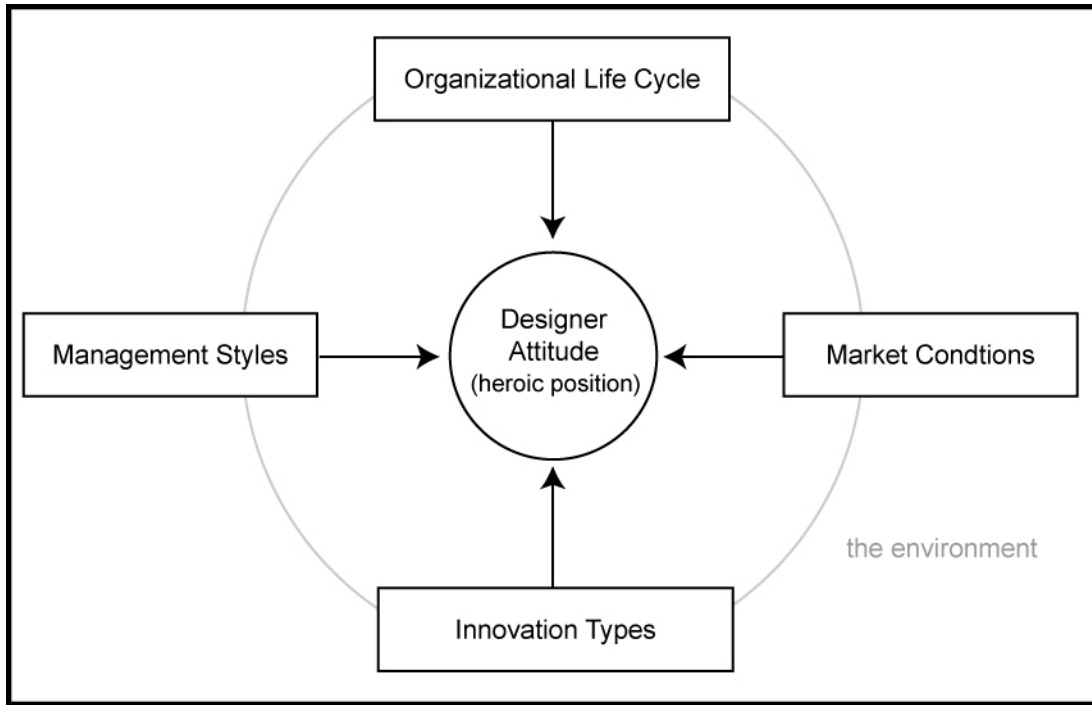


Figure 1: Hypothetical Model

This model is a schematic interpretation, meant to be a conceptual tool to help design managers identify the factors they should consider in deciding meaningful allocations of designers to projects and, hopefully, advance a fertile culture of design spirit and creativity. This model can enable managers to develop an empathic connection to the corporate environment, making suitable adjustments for a design fit, thus supporting a company’s well-being. What follows is a breakdown of each factor; there may be others, but these provide a useful starting point for debate.

Organizational lifecycle: As poetically conveyed in Shakespeare’s “Seven Ages of Man”, there are distinct phases that unfold throughout the life of an organization, encompassing birth, growth, maturity, eventual decline and (perhaps) renewal. This progression undoubtedly shapes the environment in which a designer operates, influencing her activities and attitudes, due to value and cultural changes (Dewey, 1997). Below is a table describing the major stages, largely based upon an analysis comparing companies to civilizations (Miller, 1990).

<i>Inception</i>	just starting out, with few employees, basic business idea is the inspiration for the group purpose
<i>Survival</i>	time of accelerated growth with extreme ramp-up, typical of many dot-com firms, fierce dedication to group mission, varying levels of

	emotional highs and lows, roller-coaster rides
<i>Specialization and expansion</i>	specialized roles are increasingly defined and territories established, delegation, consensual decision-making, integrating knowledge of specialized experts, seeking new pro-growth opportunities, building upon what's been established in survival mode
<i>Structure and security</i>	rise of administration due to previous specialization, start to serve the need of the administrator, securing order, rationality, risk-aversion, stability and peaceful existence
<i>Bureaucracy</i>	administrators dominate, very risk-averse, minimal creativity, minimal innovation, resources used for internal issues, erosion of social cohesion, infighting, loss of control at the edges

Market conditions: What is the market situation for the company, competitively and in terms of customer perceptions and expectations? This can be gleaned from conducting an industry-standard SWOT (strengths-weaknesses-opportunities-threats) analysis, which can ascertain various signs that could determine how to best leverage designers in product development strategy or policymaking activities (Schilling, 2004). Depending on market receptivity to the product, different kinds of design activity may be needed.

Innovation types: It is common to celebrate transformative innovation as the one and only savior of business, but innovation means different things at different points in a lifecycle. Darrel Rhea of Cheskin suggests a continuum of innovation from incremental improvements, to evolutions, to inventions, to entire industry transformations (Rhea, 2004). Business scholar Geoffrey Moore suggests a slightly different set of innovation types—disruptive, application, product, process, experiential, marketing, business model, and structural—which he maps to an evolving “technology adoption lifecycle”, featuring time and revenue growth potential, as a continuous curve (Moore, 2004). Either way, it is important to recognize that innovation is not a single static concept but multifaceted as well.

Management styles: Managers primarily serve the role of preserver, ensuring efficient allocation of resources to achieve an organizational level of equilibrium and optimal performance. Different styles exist, from parental advisement of duties to laissez-faire oversight. Also there are kinds of management, from “operational” (day to day activities) to “strategic” (department positioning), to support the delivery of design value throughout a product development cycle (Borja De Mozota, 2003).

The designer’s attitude (i.e., “heroic position”): Central to these issues is the designer’s functional and psychological roles/identity within the organization, while supporting a project, and executing the design mission for the organization. The designer occupies a certain position, which we could define by using Joseph Campbell’s renowned exploration of mythic archetypes in cross-cultural contexts. There may be certain common character types that a designer exudes in pursuing her professional path. These attitudes should be resonant with the sponsoring environment, else conflict may ensue between the individual and the collective value systems. Also, these “masks” or attitudes must evolve to suit the changing situation, reflecting and impacting the dynamics of practice (Campbell, 1972).

Below is a table of possible attitudes a designer may express, inspired by IDEO’s “hot teams”, Campbell’s mythic structures, and Cagan and Vogel’s study of integrated product development (Kelley, 2001; Campbell, 1972; Cagan and Vogel, 2002).

<i>Herald/visionary</i>	anticipates the next generation, novel disruptive embodiments, or “coolhunting” new styles to invent a design language
<i>Barbarian/craftsman</i>	tries to get a strong grip on a chaotic situation, conquering the crisis of the moment, intensely building prototypes to inspire and settle emerging problems, towards building a unified vision...there is often high emotional investment, with a polarizing effect on bystanders of the product design process
<i>Pulsetaker</i>	empathizes with customers and other stakeholders of a process, ensuring stability and security of the design/product design outcomes, by building positive relationships...this person is also effective at politicking and hiring new people to support an agenda, keeping an eye on market trends
<i>Threshold guardian</i>	erects barriers, channels, and benchmarks to ensure control and order, so as to prevent the chaos of earlier times...her goal is safety, stability and harmony through formalized processes and methods advocated as the main way to achieve unity and harmony
<i>Bureaucrat</i>	dominates the agenda with procedures, preferring incremental safe improvements to avoid jolting the now-secure status-quo that has been

	established politically and organizationally
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There is no judgment inherent to these attitudes, as “good” or “bad”; the issue of ethical value will need to be addressed separately. However, a well-seasoned designer will likely have expressed each of these at some point along her career path, either at one company or different ones over time. A designer is a versatile, complex being whose attitudes will shift; there is an interplay of values between organism and environment that cannot be ignored. The challenge to the design manager is to support and advocate for the proper attitude when it is most beneficial to the organization and reinforcing the designer’s natural tendencies.

Steps Towards a Research Agenda

There may be other factors and relationships involved, but this model is sufficient to start a compelling discourse to supplement the design leadership community’s knowledge base. To contend with the complexities of design practice in diverse organizational constructs, a new conversation must begin on the issues of lifecycle development, understanding rhythmic changes, and emergent behavior to help support productive, dynamic places of creativity. To deepen and sustain that conversation, there needs to be a research agenda to explore the relationships among these factors that may empower or inhibit a designer’s attitude from arising at the right time.

Such an agenda will necessarily make ample use of various methods espoused by cultural ethnographers and humanist scholars like Brenda Laurel, Liz Sanders, Paul Rothstein, for understanding contexts and activities. Traditional HCI (human-computer interaction) literature suggests methods for effective data collection and reporting. Compelling case studies of companies will prove useful to identify core thematic connections. Accordingly, firsthand observation and partnership with companies from software and other industries will be crucial. In addition, the researcher should consider the following materials:

- IDEO’s “hot teams” concept, and its application in the creation of rapid prototypes and concepts
- Alan Cooper’s goal-directed design process, as a front-end discovery and visionary phase in software development
- Cagan and Vogel’s integrated product development process, forging a triadic relationship among design, marketing, and engineering
- Geoffrey Moore’s technology adoption cycle mapped to multiple types of innovations

- Paul Pangaro’s cybernetics approach to product development, leadership, and language
- Sony’s “Sunrise-Sunset” product development life cycle phases
- Philips’ historical emergence of “design consciousness” in their culture and environment
- Apple’s evolution of design style and philosophy, as well as use of consulting firms and in-house designers to express their global brand

Further questions to investigate include:

- When does an organization transform from one type to another along its lifecycle—and what are the impacts upon design innovation?
- What is the standard duration of each lifecycle phase and how is that affected by the identified factors of management, innovation, and market conditions?
- How do evolving value systems manifest within a company’s brand and product line? How is that effectively communicated to the ecosystem of people associated with a company: employees, customers, partners, etc.?
- How can the proposed model be improved to help organizational decision-makers assess the calculated risk of design investment and strategic outlook for adjusting a culture?

Conclusion

The suggested model and its guiding ideas are continually in progress, towards improving our understanding of design practice. The goal is to sustain productive debate about ways to fulfill a designer’s creative potential in complex corporate environments, using the e-business situation as the impetus. Accordingly, constructive feedback is welcome and appreciated.

References

- [1] Beier, B. and Vaughan, M. 2003. “The Bull's-Eye: A Framework for Web Application User Interface Design Guidelines,” *CHI 2003*: 489-496.
- [2] Borja de Mozota, B. 2003. *Design Management*, New York, NY: Allworth Press.
- [3] Cagan, J. and Vogel, C. 2002. *Creating Breakthrough Products*, Upper Saddle River, NJ: Financial Times/Prentice Hall.
- [4] Campbell, J. 1972. *The Hero with a Thousand Faces*, Princeton, NJ: Princeton University Press.
- [5] Dewey, J. 1980. *Art as Experience*, New York, NY: Perigee Books (reprint).
- [6] Dewey, J. 1997. *Experience and Education*, Free Press (reprint).

- [7] Kalakota, R. and Robinson, M. 1999. *e-Business: Roadmap for Success*, Reading, MA: Addison-Wesley Longman, Inc.
- [8] Kelley, T. 2001. *The Art of Innovation*, New York, NY: Currency.
- [9] Kunkel, P. 1997. *Apple Design: The Work of the Apple Industrial Design Group*, New York, NY: Graphis Inc.
- [10] Miller, L. 1990. *Corporate Life Cycle Strategies*, New York, NY: Ballantine Books.
- [11] Moore, G. 2004. "Darwin and the Demon," *Harvard Business Review* (July-August): Online Reprint #R0407F.
- [12] Pine, J. and Gilmore, J. 1999. *The Experience Economy*, Boston, MA: Harvard Business School Press.
- [13] Rhea, D. "Using Design Research for Product and Brand Innovation," *Design Management Institute Seminar*. San Francisco, CA: April 2003.
- [14] Rosenberg, D. and Gajendar, U. 2004. "24/7 or Bust: Designing for the Challenges of Global UCD," *CHI Extended Abstracts. 2004*: 1063-1064.
- [15] Schilling, R. "Tools for Strategic Management," *Stanford University Continuing Studies Course*. Palo Alto, CA: July 2004.
- [16] Wohlfarth, J. 2002. "Making the Grade," *International Design* (October): 54.