Experiential Aesthetics: A Framework for **Beautiful Experience**

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refers to anyone who uses a product or service, regardless of industry. Thus, a user of e-business software is a consumer, iust like the user of a home camera. Fach person is consuming a tech nology to perform a task

[2] We don't actually

design experiences We design only the

contexts, interfaces and

artifacts that might lead to a positive experi-

ence. Experiences are

individual's own will and attitude. Designers are

merely the arbiters of a potentially good user

deeply personal and self-generated, per the Why have a framework for understanding beauty? Isn't beauty simply obvious, like the infamous Supreme Court quip about pornography—"You know it when you see it?" Perhaps for natural forms of beauty—flowers, landscapes, animals, human bodies—subjective taste may suffice for coffee-table pundits and aesthetic philosophers alike. But in the high-stakes world of product development, where delicately balancing profit motive with consumer value is paramount, more than a mere appreciation for beauty is needed. One must actively create and deliver "the beautiful" when designing "the artificial"—objects for popular consumption. That requires multidisciplinary cooperation to succeed. Therefore, a coherent model identifying specific, tangible elements of a beautiful experience will enable a designer to argue effectively with nondesign peers leery of poetic speak. The result is an informed team able to achieve "the beautiful" via compelling experiences for consumers [1].

As designers we espouse a useroriented philosophy toward improving technologies that support people in their daily tasks.

It is a decidedly humanistic outlook, guiding the conception and creation of products to be useful, usable, and desirable. If we probe further, however, we would discover that the noble pursuit motivating a great majority of designers (not analysts or researchers or strategists) is the creation of something, quite frankly, beautiful. One of the pioneers of American industrial design, Buckminster Fuller, captured this succinctly: "When I'm working on a problem, I never think about beauty. I think only how to solve the problem. But when I have finished, if the solution is not beautiful, I know it is wrong." This statement aptly acknowledges the primacy of problem solving, but it also notes the role of beauty as a desired outcome. Beauty is admittedly tricky to describe, given commonplace notions. For now, I use the word as an imperfect shorthand to encompass multiple concepts as artfully phrased by Paul Rand: "to illuminate, to simplify, to clarify, to modify, to dignify, to dramatize, to persuade," thus resulting in something that elicits a deeply positive feeling. This emphasizes the sublime yet humane quality that transcends mere tactical wizardry of material shapes and styles.

From Posters to Toasters...

Yet the dominant evidence for the designer's pursuit of beauty is found in the material world of images and objects that surround us, from home to office and beyond.

Take graphic design: posters, logos, brochures, cafe menus, and so forth. The driving purpose is effective communication of a message, amplified by a choreography of visual elementsshape, color, type, image—to elicit an emotional and behavioral response, such as enjoying a story or buying a brand of toothpaste. You can find this at the movies: "Gattaca's" title sequence evocatively suggests a cinematic meditation on a genetically enhanced future. Or at a bookstore: A recently designed reissue of the classic renegade text, The Communist Manifesto, exudes hipness with a luscious red cover and digital typesetting (perhaps betraying its proletariat origins!). Edward Tufte's intimately detailed charts of quantitative stats convey deeply absorbing narratives of data, beyond a dreary spreadsheet or (gasp) PowerPoint show. Finally, John Maeda's computational artistry lends elegance and grace to Shiseido's advertising and marketing materials.

One can also look at industrial design: furniture, toys, housewares, tools, medical devices, and so forth. Our landscape is populated by products of varying materials, forms, colors, and textures, created for utility and pleasure. You can start in your own home: from the humble paper clip to Fiskars scissors, a hallmark of simplicity and (extremely sharp) elegance. Then, browsing the pages of a Design Within Reach catalog (or for the more budget-conscious, IKEA or Target will do), you'll witness a parade of beauty. From Noguchi's landmark table, blending organic wood with glass precision in a Zen-like koan, to Herman Miller's Aeron, now a classic of worker "geek chic" for the dot-com era, that transformed attitudes about office life. At the other end, Aston Martin and Lamborghini glamorize aggressive styling and sporty performance as an avant-garde catalyst for mainstream vehicle design.

Indeed, the recent successes of IKEA, Target, OXO, Samsung, Nike, and other firms (now mythologized to the point of cliché in the pages of Fast Company and BusinessWeek), point to our desire for beautiful products. There is a rise of "aesthetic consciousness" among today's consumers, who are seeking improved standards of living through quality of material and, yes, stylish design.

Moving Toward Experience

But what about the multidimensional world of digital experience—a transient mélange of time, motion, interaction, anticipation, context, and culture, erupting from momentary contact with some digital form:

website, software, mobile device, or online service. What does it mean to create beauty for the digital?

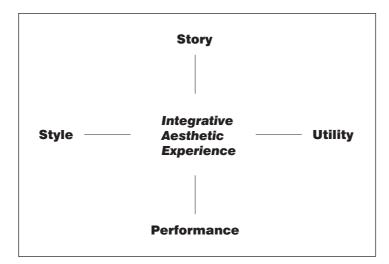
First we need to understand what is meant by "experience." Definitions (and controversies) abound beyond our scope, but for this article I approach experience as a multilayered relationship between a person and an "other," comprising cognitive, emotional, psychological, and sensual phenomena brought into awareness via some contact [2]. Scientists can offer a detailed analysis of what transpires during an experience, but our focus here is the "relationship"—an engagement based upon a twoway street of interaction and communication—that shapes the overall quality of the encounter itself. It may be ephemeral, but it is still influential upon the consumer and his relation to "the other"

So what exactly is this "other"? It could be a rich website, a desktop application, mobile device, airline kiosk, health care system, or even the culture of a company, thus spanning the range from physical to digital and beyond. It could even be the barista at your local coffee shop, serving your skim-milk latte. Each of these "others" has various facets to enable a positive or negative encounter given its context. Each has various affordances and capabilities, from buttons and icons and widgets to gestures and facial expressions bound by social norms.

This expansive range of types

Anish Kapoor's Cloud Gate, an elliptical sculpture in Chicago's Millenium Park, reflects the city's skyline and inhabitants. Its mirror-like exterior creates a beautiful, interactive experience.





of forms, situations, and technologies impacting the design profession. There is an emerging spectrum of designed outcomes, from the material to the imma-[3] John Dewey may have terial, with increasing complexbeen the world's first "user experience strate ity and dimensionality. From gist" when he published 2-D (graphics), 3-D (objects), 4-D Art as Experience in 1934: in it he defined the (software, networks), n-dimenqualities of a complete experience and its consional (services, systems, nection to human emoenvironments, cultures), each tion, formal expression and the social aspect of new type of "other" adds to the being human. His ideas influenced Moholy-Nagy overall set of human interaction/ of Chicago's Institute of communication problems, with Design, and the design school at Carnegie Mellon an increasingly panicked (hope University, among others. or fear?) realization that "design" thought and action can apply to each of them!

of "others" results from the cur-

rent Cambrian-like explosion

Which brings us back to the article's theme: How does this brave new world affect the modern designer's pursuit of beauty? What is the role and value of beauty anymore if it's all becoming immaterial, transient, and mediated by "the digital"? Is beauty, in effect, dead?

and the core elements of a rhetorical argument, drawn from classical theory originally developed by Aristotle and more recently elaborated upon separately by Wayne Booth and Richard

Buchanan

[4] Keen readers will see the strong parallel

between this framework

Beauty Redefined as Aesthetic Experience

Of course beauty still survives. Our understanding of beauty must evolve with the rapidly changing sets of problems and opportunities toward a powerful conception that I label an "integrative aesthetic experience." Let's briefly unpack this phrase:

- Integrative. Beauty must be repositioned away from surface effects toward a cumulative sense of how fundamental elements (style, performance, utility, and story) work in concert to achieve something memorable and desirable, thus deserving repeat purchase and positive testimonial.
- Aesthetic. Aesthetic implies a complete and total sense of human value connecting to the consumer on multiple levels: emotional, sensual, and reflective or intellectual. This, incidentally, maps to Don Norman's recent writings about the tiered levels of a pleasurable product's impact, as well as Gianfranco Zaccai's declaration for redefining beauty, written more than 15 years ago. Zaccai said of aesthetics, "It is related totally to our ability to see congruence among our intellectual expectations of an object's functional characteristics, our emotional need to feel that ethical and social values are met, and our physical need for sensory stimulation."
- Experience. And yes, experience does matter! Indeed it is cliché that we live/work within an "experience economy," colored by a now-empty phrase thrown

about with slick advertising. The truth is, addressing the human experience has become the central task for designers today in the Deweyan sense [3]—targeting a personal encounter with a technology or system—whereby the individual feels satisfaction and (dare I say it) transcendence... where the momentary becomes momentous!

The Framework Revealed

Stepping back for a moment, this thinking suggests a profoundly humanistic perspective on beauty, with its motives centered on human experience. But the engineer and manager are eager to build a shippable product, with clear-cut instructions. So, it's now time for a profoundly pragmatic deconstruction of what this all means for real-world product development. The framework itself comprises four core elements: style, performance, utility, and story (see Figure 1). These elements must be held in high balance such that none is deficient, to achieve the ideal of the integrative aesthetic experience—or "the beautiful"—in designing digital experiences and beyond. What follows is a brief explanation of each concept, supported by specific examples [4].

1. Style (How does it look and feel?) The sensual "voice" expressing product brand and quality, commensurate with business goals and user expectations. High style is valued more and more by consumers for emotive reasons, per Virginia Postrel's pop-cultural examination of an "aesthetic imperative" arising, whereby people increasingly expect Ikea, Target, or Apple levels of style nowadays as the norm. And as professors

Vogel and Cagan state in their popular textbook on product development, "high style" is one of the necessary determinants for achieving marketably successful breakthrough innovations, like OXO's Good Grips line or the iPod. Examples:

- The iPhone exudes a clean, sexy industrial design, with richly luminous graphics in its
- A Lamborghini features an aggressively sporty styling of the exterior that commands spectator attention, down to the details of its wheel spokes and air-intake grills.
- Google's products famously showcase a "nonstyle" of minimalism: blue text links and faded colors, with minimal graphics, airing a low-frills aesthetic character focused on engineering skill.

2. Performance (Does it work?)

The technical functionality of the product, for the intended user base and its primary usage scenarios. Industrial-strength engineering, anytime/anywhere accessibility, 99.9999 percent uptime, rapid updates, and onthe-fly responsiveness all indicate the notion of performance. Examples:

- The original iPhone's novel touch screen and gyroscope sensors function smoothly to allow nimble gestural interactivity; however, AT&T EDGE network's abysmal performance rendered its Internet ability null.
- Exotic supercars feature highly tuned engines for rapid acceleration and exceptional cornering, braking, and overall body stability for exhilarating driving.
- BlackBerry devices perform nearly flawlessly (when the network isn't down!) with always-on

email, for quick messaging needed by their super-busy corporate users.

3. Utility (Can I use it?)

The combined usability and utility of the product's features for the targeted audience and context. Is it ergonomic, culturally appropriate, psychologically meaningful? Are the affordances easily conveyed? Is it accessible and standards compliant? These issues make up the notion of utility here. Examples:

- The iPhone has clear typography, concise symbolism, and interaction cues for navigation, all consistent with Apple's legendary "ease of use."
- The Toyota Prius has a visually animated fuel-efficiency diagram to clearly show (and motivate) the green-conscious driver, complete with voicebased GPS navigation and handsfree phone calls.
- Flickr made community photo-sharing hip, popular, and useful via multiple devices, platforms, browsers, etc. Anyone with a digital camera or cell phone can join the phenomenon, get images for a book report, or see the latest party pics.

4. Story (How does it all connect? What is the purpose?)

A narrative that tells the scenario of use for the product and outlines the benefits for the targeted consumer/context. How does this product or feature fit within the company's portfolio? What is "the story" that describes how this offering fits the user's needs and goals? Examples:

• The iPhone fits perfectly within Apple's consumer-lifestyle lineup, with a nicely connected flow from purchase to unboxing, to syncing media via iTunes. There is a complete branded ecosystem in every sense.

- The original Palm Pilot was built around a focused story of "personal digital assistance," expressed as four clearly marked buttons, thus making it approachable and useful for many users.
- Adobe Lightroom has a clearly articulated workflow model for the UI that maps to the flow of professional photographers and is free from the muddying of unnecessary features.

So there you have it—the model of an integrative aesthetic experience, composed of elements found in every product experience in varying levels, digital or otherwise. The elements are inescapable; however, not all products carry these elements in balance.

Often there is a deficit in one (or many) elements, or some elements overpower the others with excessive emphasis, mismatching the consumer's needs and values. This can result in terrible headaches for unlucky users. Here are some notable examples:

Aesthetic Headaches

- E-Business (or enterprise) software
 - Microsoft Office suite
 - Motorola RAZR interface
 - Comcast DVR interface
 - Cisco IP Phone ecosystem

Shared qualities: A confusing navigational structure, poor workflow, too many buttons, interruptive and presumptuous messaging, lack of obvious functionality, doesn't do what the user wants, obscure (or needless) features, heavy loading with slow performance, primitive visual style, confusing mental models.

Very few products effectively

interactions

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prior specific permission and/or a fee. © ACM 1072-5220/08/0900 \$5.00 pull off all four elements at a very high level. Those that do can rightly be described as "harmonies": Here are some notable examples:

Aesthetic Harmonies

- Apple iPhone + iTunes + Mac OS X
- Toyota Prius, Dyson DC-11, OXO kitchenware
 - XBOX 360 + Live Marketplace
- Adobe Lightroom UI + digital SLR workflow
- Virgin America Web signup + flight experience

Shared qualities: High levels of story, style, utility, and performance all consonant with each other, interrelated and contributing to a memorable, positive quality of engagement that is rich and pleasurable. There is delight, a sense of flow and transparency of the interface, satisfaction, and joy of use. Also a strong brand connection and delivery of the brand's promise.

Using this framework we can identify easily/quickly the problems underlying aesthetic breakdowns. Most often it's because of a deficiency in one of the four elements. More than simply a feeling, we can point to story or style or performance or utility as the break points. Thus, the framework provides a ground for designers' arguments and anchors interdisciplinary debates to specific points, avoiding the opinionated and personally defensive. The framework becomes a vital tool for critical analysis comparing/contrasting design solutions. One could also append relative metrics (a Likert scale of sorts) to each element to internally gauge their success at product-development checkpoints before commit dates.

Ultimately, the goal of this

framework is to engage with peers in a productive dialogue, thus enrolling the team into the designer's pursuit of beauty, recast now as an "aesthetic experience." Indeed, beauty in this regard sneakily becomes a shared collaborative goal, rather than a resented commandment imposed by some outside design expert. This framework is grounded in clear, simple terms suitable for a nondesign audience but still embodies those values held dear by experience designers. Managers and engineers "get" what style, performance, and utility mean. Product managers argue over "what's the story" for a feature when preparing requirements. Indeed each element maps quite well to a specific product team owner: Style is typically design, performance is engineering and QA, utility is human factors/usability with design (and QA as well), and story is generally marketing/ brand strategy. This way there is truly group ownership of the overall goal with specific people/ duties/roles tied to each element, not just random abstract concepts as mere talking points.

The integrative aesthetic experience repositions beauty for designing high-quality engagements with the digital and beyond, taking into account a complete humanistic outlook: sensual style, functional performance, human utility, and a complementary story of use or purpose that drives the overall experience. It is a potent tool for staging vital conversations about what matters most to designers, and thus to the overall product development team as a shared goal for achieving the beautiful in design. The framework leverages clear, simple, concrete vocabulary for use with any nondesign peers.

However, there is one more thing...it is not enough to simply walk through the four elements of an integrative experience and check them off a list for a team checkpoint review. This framework is not meant to be a quick formula or recipe, fostering standardized results at every turn of the handle; nor should that expectation ever be made, particularly by nondesign teammates. Designers know deep down that powerful elements of imagination, empathy, and serendipity play tremendous roles in discovering and enabling that aesthetic experience, potentially a breakthrough product that reshapes the industry (like the Wii, Prius, Dyson, etc). To create the beautiful must involve qualities of inspiration and transcendence that speak to aspirational values held by us as human beings (not mere users or consumers), as we seek to extend and discover something that calls out to an "experience of being fully alive" (as Joseph Campbell alludes to). For only then is the beautiful in design truly created!



ABOUT THE AUTHOR

Uday Gajendar is a UI designer based in Silicon Valley. His work has spanned enterprise software, creative tools, Web

applications, and phone devices at a range of companies—Oracle, Adobe, Cisco, and Involution, a boutique design studio. Holding degrees in both interaction design (Carnegie Mellon) and industrial design (Michigan), Uday advances the field with frequent talks and papers about designing attractive, intuitive digital products. You can read his latest thoughts at www.ghostinthepixel.com.

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