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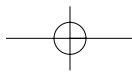
Introduction

Life is precious. The tragic events of September 11th provided us with a painful reminder of this simple truth. The attacks on the World Trade Center and the Pentagon also raise a number of important issues about design. First, they highlighted the potent symbolic value that objects can attain within our increasingly global culture. Second, the attack made clear how vulnerable designed objects are when placed in situations for which they were not intended. Third, the attack points out how central design is in establishing and challenging conditions of security. In the immediate aftermath of the attack, security concerns will, no doubt, figure prominently in discussions of design. In the long term, however, it is designers' ability to nurture and celebrate the dignity of all life that holds out the best hope for a better future.

We raise these points to confirm the journal's belief that design issues are embedded in social situations where one might least expect to find them. In his introduction to Daniel Defoe's *An Essay on Projects*, which we are publishing in this issue, Tomás Maldonado notes that we live in a "projecting age," as Defoe called his own time more than three hundred years earlier. Maldonado sees Defoe, who is known to many primarily as the author of *Robinson Crusoe*, as someone who can help the world develop a new sense of "Honest Projects."

The term is well suited to characterize the articles in this issue, all of which deal in one way or another with the struggle to characterize design as a socially meaningful activity. Sulfikar Amir takes up this concern on a national level in his article on the development of modern industrial design policies and practice in Indonesia. He notes how government officials as well as educators moved from a situation where design was little understood either as an activity that was valuable for economic development or one whose educational demands were not simply based on prior models from the arts or crafts. Amir shows how closely intertwined national economic objectives were with the need to develop an industrial design profession in Indonesia and he points out some of the difficulties in achieving that goal.

Cal Swann relates action research to the striving of many design professionals and educators to move beyond design's original applied arts tradition. He recognizes that the design process is one of action, yet he acknowledges that this process must be made visible and known to others. Swan advocates the adoption of practices from action research as a way of doing this, particularly project



documentation and the development of more sophisticated case studies. This, according to him, will help make design activity more understandable to researchers as well as to the general public.

Carl Francis DiSalvo, like Swann, is also concerned with the question of knowledge. His focus is on the internet and how the experience of navigating a web site can convert information to knowledge through a process which he calls “the meaningful interaction with and action upon this information.” DiSalvo uses several case studies; the Smithsonian Institution’s exhibition *Revealing Things* and a component of the Guggenheim CyberAtlas Project called “I-Life.” In a way that would support Cal Swann’s call for more case study documentation, DiSalvo analyzes aspects of the above projects to build his argument that we have spent too much energy on disseminating information and not enough on designing conditions for interacting meaningfully with it.

DiSalvo’s emphasis on experience as an important ground for knowledge echoes, albeit indirectly, Jerry Kathman’s claim that a new conception of branding is crucial in order to mark an important shift in focus by some manufacturers from the characteristics of the product to its role in a user’s life. It means going beyond the design of an appealing package to a more complex way of engaging the consumer with the product on offer, particularly in situations where the user has the option to contribute to the final form of the product itself as in the cases, for example, of some cosmetics and automobiles.

The concept of “Honest Projects” intersects with gender issues in Rebecca Houze’s article on how designers and design educators in early twentieth-century Vienna drew on the feminine identity of modern interior design. The innate talent for home decoration that women were said to possess also provided new opportunities for women designers. The exhibiting group *Wiener Kunst im Hause*, half of whose members were women, was one example which, in fact, influenced the showroom design and projects of the better known *Wiener Werkstätte*.

It is a coincidence that the theme of this issue’s cover and interior graphic spreads is the heart, a symbol of love. Designer Hanno Ehses has drawn from his extensive collection of heart images to show us how varied its use can be. Despite some ironic uses, the presence of so many hearts in this issue is a strong impetus for the entire *Design Issues* staff to express its hopes for eventual peace and justice in the world.

Richard Buchanan
Dennis Doordan
Victor Margolin

From *Wiener Kunst im Hause* to the Wiener Werkstätte: Marketing Domesticity with Fashionable Interior Design

Rebecca Houze

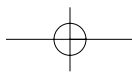
Acknowledgments

Many thanks are due to the Oesterreichisches Museum für angewandte Kunst, the Modesammlung of the Historische Museen der Stadt Wien, and the Oesterreichische Nationalbibliothek for making these photographs available for publication. Special thanks to Dr. Regina Karner of the Modesammlung, and to Dr. Angela Völker and Frau Winter of the MAK for showing me the collection of textiles embroidered by students at the Kunstgewerbeschule.

Footnotes begin on page 22.

In 1903, Josef Hoffmann and Koloman Moser, design professors at the Vienna Kunstgewerbeschule (School of Applied Arts) and members of the Vienna Secession, founded the Wiener Werkstätte (Vienna Workshops), the fashionable interior decorating company that would become the commercial standard for the new art of Vienna.¹ This venture, which sold modern textiles, furnishings, and eventually clothing, to a fashionable Viennese clientele, grew, in part, out of the well-received exhibitions of household furnishings organized by Hoffmann's and Moser's students at the Kunstgewerbeschule between 1900 and 1904. The students, five women and five men, who together comprised "Wiener Kunst im Hause," (Viennese Art in the Home) created integrated domestic interiors which they displayed at such prestigious venues as the *Paris Exhibiton of 1900*, and the fifteenth *Vienna Secession Exhibition*, held from November to December of 1902.² The *Wiener Kunst im Hause* exhibitions were praised by critics for the simple practicality and affordability of their designs, as well as for their feminine creativity. Porcelain coffee sets and embroidered table linens in particular, designed by the women in the group, seemed to evoke traditional, healthy Austrian folk art with their simple, colorful patterns. Domestic interiors were understood by the public as intrinsically feminine spaces that were most authentically designed by women, and Secessionist professors capitalized on the immediate critical acclaim that their female students received. The *Wiener Kunst im Hause* exhibitions not only represented the most modern trends in Austrian applied arts education, they also served as an important bridge to the commercial world—the world of elegant furnishings manufacturing, whose wealthy industrialists and businesspeople were the most important patrons of the new art of the Vienna Secession and Wiener Werkstätte.

Advertisements designed by Kolo Moser, for example, for companies such as Backhausen and Sons, an artistic textile manufacturer, were published in the secessionist periodical *Ver Sacrum* in 1899, and reflect the close relationship between the new art and the commercial world in Vienna at the turn of the century. One explanation for the success of *Wiener Kunst im Hause*, and by extension, of



the Wiener Werkstätte, lies in the fact that domestic interior design in the late nineteenth and early twentieth centuries was considered inherently feminine. The modern interiors on display largely designed by women enjoyed a certain legitimacy. It was the traditional role of the bourgeois Viennese lady to order and arrange her furnishings—beautifying or “dressing” her home as she would herself. Her home’s style or character was seen as an extension of her personality. Domestic interior design, therefore, by virtue of its perceived relationship to femininity, was also positioned within the realm of women’s fashion. Indeed, it was in women’s fashion magazines that the innovative designs of *Wiener Kunst im Hause* and the Wiener Werkstätte were emulated and made available to the public in popular forms, confusing the boundaries between modern art and fashion.

A number of turn-of-the century Viennese cultural critics including Jacob von Falke, curator of the k.k. Oesterreichisches Museum für Kunst und Industrie (Imperial Austrian Museum for Art and Industry), and modernist architect Adolf Loos wrote at length about the relationship of women to domestic interior design. Loos, for example, believed that Viennese women should take a more active role in the arrangement of their homes, following the model of what he considered to be healthier and more modern American housewives.³ Von Falke’s enormously popular, frequently reprinted book, *Die Kunst im Hause* (Art in the Home), first published in 1871, was an instruction manual for women’s interior decoration, the final chapter of which was entitled, “The Woman’s Occupation as Beautifier.” Von Falke’s essays were published not only in the academic journal, *Mitteilungen des k k. Oesterreichischen Museums für Kunst und Industrie*, but also in the popular women’s magazine, *Wiener Mode*, where they were eagerly read by a female audience.⁴

In an introductory article published in the first issue of the Secession-influenced design journal, *Das Interieur*, editor and architect Josef Folsenics described a “true Viennese interior.” Its most significant characteristic, he writes, is “*Gemütlichkeit*,” a kind of cozy comfort. In the early nineteenth century, the *gemütlich* Viennese interior was epitomized by the Biedermeier style:

Artist and housewife were united in a single person. Just as the young beauty could spend hours alone in front of the mirror, in deep, naive, contemplation of aesthetic questions—which hairstyle, which posture best suited her—so had she also, gradually, according to her aesthetic experience, turned her home into the charming garment of her intimate life.⁵

Modern architects such as Otto Wagner, and his students, Josef Hoffmann, Josef Olbrich, Josef Urban, and Otto Prutscher, embraced the Biedermeier style for its relatively simpler forms and clean lines, as well as for its association with a simpler domestic life.

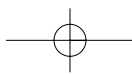




Figure 1
Else Unger. Secretary desk, 1900. Photograph published in *Kunst und Kunsthandwerk III* (1900): 117. Reprinted with permission of the Oesterreichisches Museum für angewandte Kunst.

“These men have outlined a new style,” Folsenics wrote, in the same article, “and now women can return to their rightful role as interior designers.” Folsenics implied, however, that although women do possess an innate talent for home beautification, based on their intimate understanding of aesthetics through the perusal of their own beauty in the mirror, and of their talents in choosing their own wardrobes, they also possess the weakness to lose their aesthetic sensibility in times of artistic decline, specifically because of their tendency to follow fashion. Because of the recent infusion of artistic insight by (male) Secessionist designers, women, he believed, could once again make use of their decorating talents. This new style, in fact, Folsenics wrote, “is much like a Viennese woman,” curvy and sensuous, yet intimate and ultimately more domestic than urban or cosmopolitan.⁶ Folsenics’s introduction reveals his strong ambivalence toward women, who, on the one hand, served as models of domestic artfulness yet, on the other, were incapable of true innovation, which must be accomplished by men. *Wiener Kunst im Hause* provided an interesting antidote to this conservative point of view, presenting interiors that were not only designed by women, but that creatively inspired the work of male teachers at the Kunstgewerbeschule. *Wiener Kunst im Hause* provided a new model for reconciling modern art and commerce, the domestic and the urbane.⁷

The Paris Exhibition of 1900

In 1900, an exhibition of student work from the Kunstgewerbeschule was sent to the *Paris Exhibition*. Works by talented female students, Else Unger and Gisela von Falke among others, were presented in a room designed by Josef Hoffmann. The decorative objects were displayed as if arranged in a private home, rather than for sale in a department store, or as permanent exhibits of an art museum. English art critic Gabriel Mourey wrote that the Kunstgewerbeschule, led by Josef Hoffmann, had presented the “only truly modern and national style” at the *Paris Exhibition*. He attributed the successful fresh and cohesive quality of the designs to the school’s rejection of all past and foreign influences, and to their peculiar mode of exhibiting complete “interiors” rather than individual works.⁸

One of the favorite objects at the exhibition was a secretary desk designed by Else Unger in a carved wooden hydrangea motif (figure 1).⁹ This piece utilized the curvilinearity and botanical patterns that had come to be associated with the modern movement in Vienna, and with “secessionist style” in particular. Vienna art critic Ludwig Hevesi described the feel of the new work as fresh and alive in contrast to the static, more historically based works of just a few years before. “The motifs are taken from less frequently tread areas of botany,” he wrote. “The plants are seen with freer eyes and depicted in a fresh, ornamental mood.”¹⁰ This new era of

Figure 2

Heinrich Comploj, Gustav Schneider, August Patek, and Otto Prutscher. Appliqué textiles designed for the Kunstgewerbeschule Pavilion at the *Paris Exposition Internationale of 1900*. Photograph published in *Kunst und Kunsthandwerk III* (1900): 119. Reprinted with permission of the Oesterreichisches Museum für angewandte Kunst.



modern art was exemplified by the work of the young, female designers.

This preoccupation with fresh new life was closely related to the artistic program of the Vienna Secession, which proclaimed youth, growth, and organic rejuvenation with their motto, “Ver Sacrum,” (Sacred Spring), and with their visual imagery.¹¹ The Secession building, an exhibition hall designed by Josef Olbrich to house the group’s work, for example, featured a plasterwork frieze of growing trees surrounding the front entrance, which grew into a Jugendstil gold leaf dome of airy leaves and branches. The Secessionists often chose the image of a young woman, exemplified by Gustav Klimt’s 1898 painting of *Nuda Veritas*, to embody their ideas of creative transformation. It is not surprising that Secessionist professors at the Kunstgewerbeschule were attracted to the work of the very real young women students, whose designs displayed a similar fresh and vibrant character. This “primitivism” of looking to young women students at the Kunstgewerbeschule for inspiration had its counterpart in the exhibitions of traditional folk embroidery held at the Oesterreichisches Museum. In a review of the *Special-Ausstellung Weiblicher Handarbeiten* (Special Exhibition of Women’s Handcrafts) organized by Jacob von Falke in the spring of 1886,

textile curator Alois Riegl praised the display of colorful, lively regional embroidery which, he believed, represented the future direction of artistic innovation.¹² Court embroideress Emilie Bach, in her contribution to the exhibition catalog described this work as like a “wildflower bouquet.” “In every case,” she wrote, “an eminent feel for style and a naïve, healthy artistic sense is expressed in these works, which is not always characteristic in the homes of educated, urban residents.”¹³ Native peasant embroidery seemed to offer a fresh new spirit of artistic creativity in the same way that the innovative designs by women students at the Kunstgewerbeschule reflected the secessionist program of artistic regeneration.

The most striking aspect of the room at the *Paris Exhibition* was its use of oversized ornamental motifs in appliqué textiles (figure 2). The traditional appliqué embroidery technique of embellishing furniture coverings, cushions, upholstery, and drapery, by stitching cut pieces of cloth onto a cloth background, was extended to cover the walls as well. The modern Viennese interiors displayed at the *Paris Exhibition of 1900* revealed a growing interest in the use of textiles and traditional handwork not only as decorative objects to be incorporated into designed rooms, but as models for the organic, flexible dressing of an interior space. This application of textile “dressings” to the walls of the pavilion directly relates to the German architect Gottfried Semper’s influential “Bekleidungsprinzip” (Principle of Dress), which was of theoretical significance to Otto Wagner and his students, including Josef Hoffmann. According to Semper, the textile arts represented the earliest form of man’s art-making tendency, which would evolve into architecture. Woven mats, for example, which were originally hung to divide the space of a room, eventually became structural walls, which retained the woven texture of fiber in new materials, such as brick or stone.¹⁴ Because textile arts such as lace, tapestry, and embroidery represented the seeds of artistic creativity, they took on a central role in programs for the reform of applied arts institutionalized at the Oesterreichisches Museum under the advice of Semper, who brought his ideas to Vienna in 1864.

The effort to improve the national industrial arts in Austria from the 1860s through the turn of the century took place largely through the Oesterreichisches Museum and Kunstgewerbeschule.¹⁵ The first generation of curators at the Oesterreichisches Museum, especially Jacob von Falke and Alois Riegl, actively collected many historical textiles including medieval French tapestries, Belgian lace, oriental carpets, and embroidered court costumes, ecclesiastical garments, and altar decorations from the sixteenth century.¹⁶ They promoted public interest in the textile collection through exhibitions and scholarship. At the same time, from the 1860s through the 1880s, the first generation of professors and administrators at the Kunstgewerbeschule, most significantly the architect Josef Ritter von Storck, fostered courses in textile design—primarily in orna-

mental drawing for lace and embroidery patterns. Auxiliary craft schools were established in Vienna concurrently with the courses offered at the Kunstgewerbeschule that specialized in teaching traditional textile-making skills. The k. k. Fachschule für Kunststickerei (Imperial School of Art Needlework), run by the famous court embroideresses Emilie Bach and Therese Mirani, educated a generation of young women in traditional and exotic embroidery techniques, often executing contemporary designs drawn by students at the Kunstgewerbeschule. Josef Ritter von Storck, in addition to his duties as a professor at the Kunstgewerbeschule, established and ran the Centralspitzencurs (Central Lace Course), a workshop devoted to studying historical lace patterns and techniques, and to producing contemporary lace designs.¹⁷

In 1897, a second wave of professors, curators, and administrators greatly changed the profiles of the Oesterreichisches Museum and the Kunstgewerbeschule which, since their inception, had reflected the aristocratic and liberal bourgeois tastes of mid-to late-nineteenth-century Vienna by supporting and perpetuating a predominantly neo-Renaissance aesthetic. The new modernists, including the director of the Oesterreichisches Museum, Arthur von Scala, and the director of the Kunstgewerbeschule, Felician von Myrbach, rejected the academic, historicist style associated with architects such as Gottfried Semper and Josef Ritter von Storck. Instead, they supported contemporary international designs by young architects such as Josef Hoffmann, Adolf Loos, Henry van de Velde, Charles Ashbee, and Charles Mackintosh. Interestingly however, despite the change in preferred furniture and architecture style, the modernists retained and even amplified the Oesterreichisches Museum's and Kunstgewerbeschule's interest in reviving the traditional textile arts. This is clear, for example, in Riegl's review of the 1886 *Special-Ausstellung Weiblicher Handarbeiten* mentioned above.

The second, modernist generation of professors and administrators at the Kunstgewerbeschule was heavily influenced by the Vienna Secession of 1897. Felician von Myrbach, himself a painter and original member of the Secession, appointed several of his most influential colleagues—theatrical set designer Alfred Roller, architect Josef Hoffmann, and designer Koloman Moser to be professors at the school, and to teach innovative new courses in furniture, glassware, metalwork design, and flat-pattern drawing. Many of the secessionist professors' most talented students, such as Else Unger, Marietta Peyfuss, Berthold Löffler, Max Benirsche, and Dagobert Peche—a substantial number of whom were young women—would go on to form a third generation of modern designers at the Wiener Werkstätte.



Figure 3
Josef Hoffmann. Katalog der VIII. Ausstellung der Vereinigung bildender Künstler Österreichs Secession, 1900. Reprinted with permission of the Oesterreichisches Museum für angewandte Kunst.

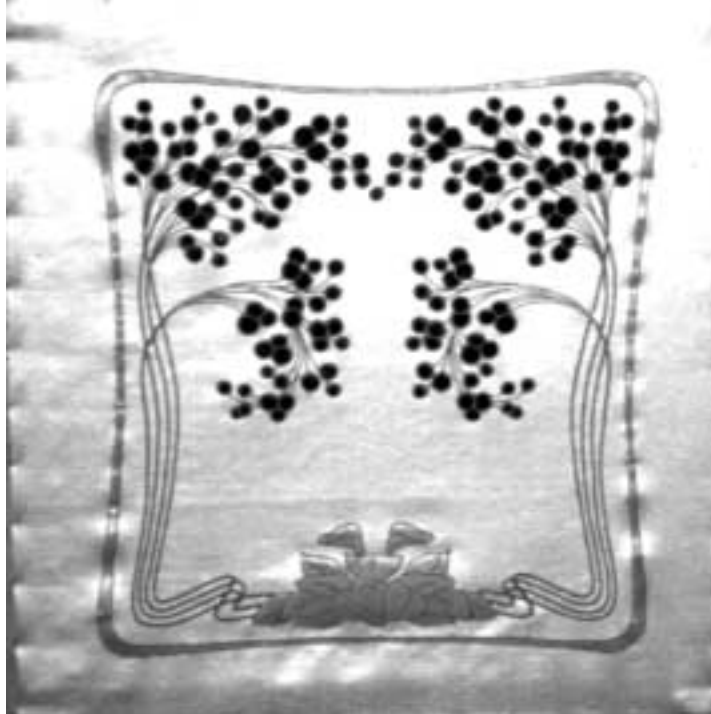
Lace-making, tapestry-weaving, and embroidery were activities that traditionally had been carried out by women, and the Secessionists looked to their female students at the Kunstgewerbeschule and female colleagues at the k.k. Fachschule für Kunststickerei for inspiration and collaboration. As is clear from the statements above by Loos, von Falke, and Folsenics, modern artists and critics attributed to women an inherent artistic sensibility in the decorative domestic realm. Modern designers at the Kunstgewerbeschule, therefore, wanted to tap into the feminine artistic sensibility to create genuinely artful decorative designs for the home without succumbing to the influences of mass-production. But the designs produced by the Kunstgewerbeschule and later Wiener Werkstätte were immediately perceived as “fashionable” by both the artistic elite and popular audiences, and were quickly appropriated by the fashion world in the form of clothing and embroidery patterns “in the modern style.” The quick acceptance of “modern style” by women’s fashion magazines at the turn of the century, and the concurrent influx of young female art and design students at the Kunstgewerbeschule, raises many questions about the role of women at the intersection of “art” and “fashion” at that time. Why were the male Secessionists so attracted to the textile arts in the first place? Why did they mistrust women’s occupation of these realms, and how did they try to control them? In what ways were they motivated by a particularly feminine engagement with fashion, even as they reacted against it? The problematic relationship between creating modern designs to be used for clothing and domestic spaces, while simultaneously resisting fashion, can best be examined by looking more closely at the relationship between feminine dressing up the self and dressing up the home. It was this tension that the Secessionists so expertly exploited in their art and designs.

The Exhibition of Domestic Interiors and Embroidery at the Vienna Secession and Kunstgewerbeschule, 1900–1901

Following the successful showing of Austrian decorative arts at the *Paris Exhibition*, the Secessionists held an exhibition of their own which further highlighted new innovations in furniture and interior design. This eighth Secession exhibition, held in November and December of 1900, featured works not only by Josef Hoffmann and Kolo Moser, but also by the Belgian designer Henry van de Velde, Charles Ashbee’s Guild and School of Handicraft from England, and the Glasgow artists Charles Rennie Macintosh and Margaret MacDonald, each of whom were greatly admired by the Austrian group. Hevesi wrote that seeing the Secession exhibition after the chaos and turmoil of Paris was like a “vacation in the country.”¹⁸ The exhibit, with its narrow, calico-covered catalog, decorated with small, interesting vignettes, was a delight for the viewer (figure 3). The fact that the catalog for an interior design exhibition was

Figure 4

Marie Stempkowska. Embroidered pillow cover, c.1900–1901. Photograph published in *Kunst und Kunsthandwerk IV* (1901): 237. Reprinted with permission of the Oesterreichisches Museum für angewandte Kunst.



covered with printed cloth is significant. Not only was it covered with cloth, but a different printed textile was used for the cover of each copy, further drawing attention to the material, and deliberately identifying the exhibition with the fabric itself.

Hevesi's comments signal the implicit dichotomy between the unhealthy, modern city and the healthy, timeless, therapeutic countryside, which runs through much of the discourse surrounding the reform of applied arts at the turn of the century. Viennese designers at the *Kunstgewerbeschule* and *Wiener Werkstätte* sought to infuse modern, urban style with a naïve, feminine, domestic comfort, which was represented by the embroidered cloth traditionally used to decorate peasant homes. Colorful dish towels, draperies, tablecloths, and bedspreads, designed by women students at the *Kunstgewerbeschule*, were used to soften and warm the domestic living space, and evoked an immediate response from viewers who responded to them sensually. These textiles provided the sense of "*Gemütlichkeit*" that Josef Folsenics desired in his call for a new type of modern Viennese interior.

The 1901 annual exhibitions of the *Kunstgewerbeschule* and other arts and crafts schools from throughout the empire, including the *k. k. Fachschule für Kunststickereien*, once again featured furniture and textile designs by women artists. Critical acclaim for pieces such as an embroidered cushion cover by Marie Stempkowska, reaffirmed the success that the female students had enjoyed at the *Paris Exhibition* (figure 4). Kolo Moser's students were especially singled out for their work on textile designs. Therese Trethan, Marietta

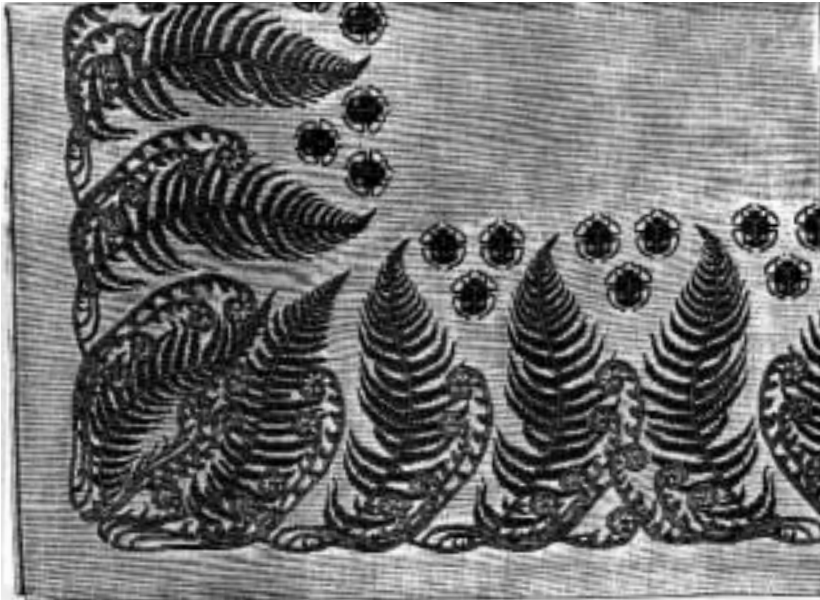
Peyfuss, Jutta Sicka, and Else Unger represented the new “feminine strength” (*weiblichen Kräfte*) at the Kunstgewerbeschule. The Oesterreichisches Museum’s purchase of several pieces of student embroidery from the exhibition, including a border design by Jutta Sicka and tablecloth by Marietta Peyfuss, attests to the success of the show.¹⁹ In a review of the exhibition for *Wiener Mode*, one critic wrote, “The feminine strength towers in all the classes of the School of Applied Arts. The women have been prepared by long tradition for the arts that lend themselves to the decoration of the home and the beautification of the everyday.”²⁰ The interest in innovative new interior design was closely related to its perceived femininity. It made use of more feminine forms, such as curvy lines and flowers, and it potentially could be very well designed by women, who were already used to the intimate beautification of themselves and their living spaces.

That fall, *Wiener Mode* began to feature embroidery and textile designs by women from the School of Applied Arts in the needlework section of the magazine, explicitly linking the new art movement with femininity and fashion. The magazine always had contained a section of needlework patterns, but beginning around 1898, stylish, contemporary embroidery designs were printed on the back covers of the magazines in colorful illustrations, as if to indicate that the trend in modern embroidery design signified the

Figure 5

Design for an embroidered pillow cover, 1900. Published in *Wiener Mode* XIV/4 (15. November 1900): back cover. Reprinted with permission of the Historische Museen der Stadt Wien.





Nr. 71. Tischdecke mit Streifenmuster. (Kopierendes Modell: 1886 Nr. 71.) Tapetenrollen gegen 1/2 m. aus 10 W. eine Nr. 1. Copierendmodell von Maxima W. 1/2 m. Höhe. Aufgehoben aus der C. L. Gesellschaft für Kunststoffe in Wien.

gerührt, wie man aus Abb. Nr. 63 ersieht. Diese Vorfläche, die nun als Tischfläche dienen und später entfernt werden, muß man auf der Rückseite des Hochrades veranlassen. Sodann beginnt man die Spitzenarbeit mit der Anlage des ersten Kreises, der aus 36 Nadeln besteht. Man durchflocht nun den Mittelpunkt des Kreises, arbeitet eine punto-triata-Knoten, eine Spitzenführung dieser Arbeit erhält man ebenfalls aus der letztgenannten Abbildung. Ist dieser Mittelkreis fertig, so zieht man durch jeden Kreis einen Faden. Man verbindet man je zwei und zwei Nadeln mit einem punto-triata-Knoten (siehe Reihe nach auf der nächsten Kreislinie aufliegen) und arbeitet über die beiden letzten Reihen die gleichen Knoten, wobei man dieselben Nadeln wie bei den vorherigen Reihen besetzt. Man tritt nun die eigentliche Weberei ebenfalls durch punto-triata-Knoten ein und fängt dann die Sterne und Spitzen ein, siehe Abb. Nr. 64. Die beiden letzten Reihen, die diese Punkte begrenzen, werden in der Art wie die Abbildung zeigt, gefügt. Der Aufwands des Stoffs erhält geschlungener Bogen. Ist die Arbeit fertig, so wird sie



Nr. 72. Gekörnte Spitze, veranlaßt zur Verzierung von Tischdecken etc.

abgetrennt, indem man die Vorfläche durchschneidet. Der Stern wird mit Schlingenschnitten an den Rand besetzt. Diese arbeitet man in diese Vorfläche, ja daß die geschlungenen Bogen auf dem Rand aufliegen.

Abb. Nr. 70. Das Riffen mit gekörnter Tischschleife ist 68 cm lang und 47 cm breit. Zur Herstellung der Schleife benötigt man ein leinwandenes, 70 cm langes und 50 cm breites Stück raffisches Garn nach dem Stoff, auf dem man die Schleife mit goldgelber und mittel-silberner weblicher Wolle nach dem Tapetenmuster (samt Farbenangabe auf dem Schnittbogen) arbeitet. Eine Lage des Stoffs umfaßt zwei Stiche über zwei Stofflagen Höhe und einen Stofflagen Hüllraum. Die Schleife umfaßt einwärts Nadeln wie mit raffischem Garn besetzt. In die Kante zwischen Schleife und Tuch waren ein goldgelber und ein mittel-silberner 4 cm breiter Bordstreifen, die in der Mitte ihrer Breite zusammengelegt und mit feinen Gleichheiten versehen waren, eingehoben, wie man aus der Abbildung ersieht. Die oberen Ecken geben Quasten auf dem gleichen Tuch.

Abb. Nr. 71. Die Tischdecke mit Kreuzschleife ist nicht so durch besonders edle, hübsche Weberei aus. Dieser Model nur 150 cm lang und breit. Die Weberei kann aber jeder beliebigen Größe angepasst werden, da man je nach Bedarf bis zur Mitte nur ein Blatt oder auch mehrere Blätter des Handtuches ausfüllen kann. Aufhängendes Seilen, dessen Größe aus Abb. Nr. 72 ersichtlich ist, gibt den Gewand der Decke. Die Schleife führt man mit mittel-silberner Weberei aus. Die ringelichten Blättern des Handtuches arbeitet man mit mittel-silberner, die Knoten der Weberei mit durchsichtiger und dem Handtuch mit hell-silberner Seide. Der Kopf, die Höhe und Höhe des Kopfes sind durchsichtiger, die Höhe des Kopfes arbeitet mit durchsichtiger Knoten und hellgrünen Tüpfeln. Die Ränder sind hell- und mittel-silberne. Abb. Nr. 73 zeigt einen naturgetreu ausgearbeiteten Koffer. Die fertige Schleife erhält einen 3 cm breiten einfachen à jour-Couss als Kofferband und kann auch mit einer klappelartige verziert werden.



Nr. 73. K. O. Kofferband (Kopierendes Modell: 1886 Nr. 73.)

von oben Seilen-
fäden gearbeitet.
Die mit einiger
Aufmerksamkeit
leicht leicht herzu-
setzen Spitze ist
früher. Das
Gerippe der Kreis-
form besteht aus
radial gezogenen Fäden. Da
diese Fäden an der Peripherie,
je nach der Feinheit des Stoffs,
je nach ein oder zwei Millimeter
voneinander entfernt sind, so liegen
sie im Mittelpunkte übereinander
und ergeben hier eine feine
Abbildung. Die Fäden sind
hängen zusammen und bilden
an der Peripherie keine
Schlingen. Zur Herstellung
unserer Spitze überträgt man
auf Hausleinen mit Nadel und
Tuch den Aufwands Kreis,
dessen Radius 7 1/2 cm beträgt.
Zuerst zieht man noch sechs
Reihen, deren Radius je 14 mm,
3 1/2 cm, 4 cm, 5 1/2 cm, 6 cm
4 mm und 7 cm betragen. Das
ganze Kreis mit man in 26
und den nächsten Kreis in
108 Nadeln ein und setzt dann
das Haus-
leinenstück auf
Hausleinen-
wand. Die Fäden
sind alle neben
einander mit
Vorfläche be-



Nr. 74. N. J. Kofferband (Kopierendes Modell: 1886 Nr. 74.)



Nr. 75. G. T. Kofferband (Kopierendes Modell: 1886 Nr. 75.)



Nr. 76. Kofferband mit großer
Kofferband. (Kopierendes Modell
gegenwärtig unter dem Namen.)

Figure 6 (left)

Marietta Peyfuss. Tablecloth, c.1900–1902. Published in *Wiener Mode* XVI/1 (1. October 1902): 14. Reprinted with permission of the Historische Museen der Stadt Wien.

height of fashion (figure 5). When women art students at the School of Applied Arts began to gain notoriety in 1901, *Wiener Mode* eagerly reproduced their textile patterns, including tablecloths by Therese Trethan and Marietta Peyfuss (figure 6), as if to indicate that the new style was not only chic, but also legitimate. These patterns had been designed by women, it was presumed, who would understand the nature of embroidery better than their male colleagues. In the fall of 1901, the modern Viennese architect Leopold Bauer wrote an article, which appeared in *Wiener Mode* entitled, “Modern Needlework in the Living Room.” He wrote that one must become the architect of one’s own home. The housewife brings color and decoration into the apartment with flowers and embroidery.²¹ In this way, the housewife and interior designer were quite explicitly linked.

Riding the wave of popular, stylish embroidery design, the curator of textiles at the Oesterreichisches Museum, Moriz Dreger, in collaboration with Josef Hoffmann and Kolo Moser, published a short-lived periodical, *Wiener Kunststickereien* (Viennese Art Embroidery), which appeared in four separate issues in 1901 (figure 7).

Figure 7 (below)

Kolo Moser. Cover of *Wiener Kunststickereien*, 1901. Reprinted with permission of the Oesterreichische Nationalbibliothek.



Figure 8 (right)

Marietta Peyfuss. Design for an embroidered chair covering, 1901. Published in *Wiener Kunststickereien III* (1901), color plate 25. Reprinted with permission of the Oesterreichische Nationalbibliothek.

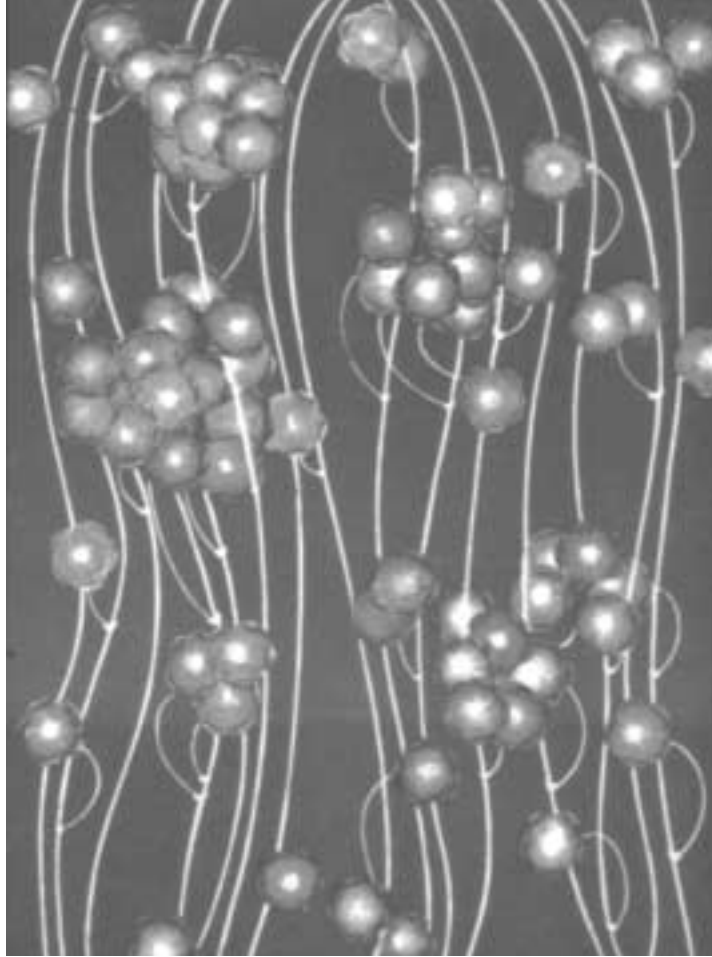


Figure 9 (below)

Emma von Strassgi-Lederer. Embroidered chair covering after a design by Marietta Peyfuss, 1901. Published in *Wiener Kunststickereien III* (1901), figure 7. Reprinted with permission of the Oesterreichische Nationalbibliothek.



The magazine was printed as a large, elegant set of color plates illustrating modern embroidery patterns by such artists as Jutta Sicka, Marietta Peyfuss, and Else Unger. Specifically, the magazine illustrated the collaboration between design students at the Kunstgewerbeschule, such as Marietta Peyfuss, and embroidery students and teachers at the k.k. Fachschule für Kunststickereien who executed their designs (figures 8 and 9). *Wiener Kunststickereien* seemed to elevate the preexisting format of the needlework section of a magazine such as *Wiener Mode* to the form of a high decorative art journal with an elite artistic, rather than simply popular, readership. *Wiener Kunststickereien* also may be seen as the natural outcome of a long-standing national program for the reform of applied arts in Austria, which frequently focused on the elevation of the national needlework industry. This new journal combined the Oesterreichisches Museum's interest in traditional needlework with the Kunstgewerbeschule's program for innovative modern design, while drawing unmistakable connections to the world of women's fashion.

Figure 10

"Wiener Kunst im Hause." Dining room designed for an exhibition at the Wiener Kunstgewerbeverein, 1901–1902. (Porcelain coffee service designed by Jutta Sicka). Photograph published in *Das Interieur* III (1902): 103. Reprinted with permission of the Oesterreichisches Museum für angewandte Kunst.



Wiener Kunst im Hause

In the winter of 1901–1902, a group of graduates from the Kunstgewerbeschule, including many who had participated the previous year in the Paris and Kunstgewerbeschule exhibitions, formed an exhibiting group, "Wiener Kunst im Hause," and together displayed three fully furnished interiors at the Wiener Kunstgewerbeverein (Union of the Applied Arts), an organization to promote the wares of commercial manufacturers. The interiors on display included a bedroom, men's room, and dining room (figure 10). The group of ten students was divided equally between male and female members, but it was the work produced by the women, Else Unger, Gisela von Falke, Jutta Sicka, Therese Trethan, and Marietta Peyfuss, that received the most attention. While the men composed the rooms and designed furniture, the women produced the majority of the decorations including rugs, linens, porcelain, and silver. The primary aim of the exhibition was to show that rooms could be designed tastefully and outfitted with good, modern products on a modest budget. The Viennese art critic, Ludwig Abels, wrote that the highly commercial, department store atmosphere of the Oesterreichisches Museum's annual Winterausstellung (Winter Exhibition) had compared very unfavorably with the innovative *Wiener Kunst im Hause* display at the Kunstgewerbeverein. This critic found the women's work, especially the linens, even more interesting than that of the men.²² The Viennese feminist journal, *Dokumente der Frauen*, praised the equal participation by men and



Figure 11
 "Wiener Kunst im Hause." Room designed for the fifteenth Secession Exhibition, 1902. Photograph published in *Das Interieur* IV (1903): 28. Reprinted with permission of the Oesterreichisches Museum für angewandte Kunst.

women in *Wiener Kunst im Hause* as a great step forward for the women's movement. Interior design, the authors speculated, might even be a field in which women could be leaders.²³

Wiener Kunst im Hause displayed their work again the following season at the fifteenth Secession exhibition, which was held in November and December of 1902. This time, the group was even more widely reviewed with numerous photographs of their work published in the architectural journal *Das Interieur*, including the main room, with a detail of appliqué curtains by Jutta Sicka (figures 11 and 12). Views of the rooms now show the rectilinear treatment of furniture and wall decoration most readily associated with Josef Hoffmann and the Wiener Werkstätte, after its establishment in 1903. The broken lines in the *Wiener Kunst im Hause* interior from 1902 intriguingly resemble stitched seams (figure 13). This is a motif that Hoffmann continued to use throughout the following decade in



Figure 12 (above)

"Wiener Kunst im Hause." Curtains designed by Jutta Sicka for the fifteenth Secession Exhibition, 1902. Photograph published in *Das Interieur IV* (1903): 227. Reprinted with permission of the Oesterreichisches Museum für angewandte Kunst.

his many private apartments, offices, and shops of the Wiener Werkstätte, and culminated in his design of the sumptuous Palais Stoclet in Brussels (1905–1911). The Kunstgewerbeschule's emphasis on traditional needlework suggests that many of the school's teachers and students, including Hoffmann, Moser, and the members of "Wiener Kunst im Hause," were constantly engaged with the conceptualization, design, or production of the textile arts, and that this engagement permeated the entirety of their work. In the *Paris Exhibition of 1900*, walls and furniture were treated with embroidered and appliquéd textiles that took on patterns derived from the graphic arts. Here, the wall has been treated graphically with a motif derived from the textile arts—working cloth with needle and thread.

That a group of former Kunstgewerbeschule students, especially female students, would be invited to exhibit at the Secession indicates the significant level of prestige and recognition the designs were given. Because the male professors at the Kunstgewerbeschule were so focused on the reform of embroidery patterns and techniques, and the use of traditional women's textile arts in the home, they were especially excited by the success of their female students. That the male professors admired and were perhaps even inspired by their female students is evident in their frequent marriages.²⁴ Privately, many of the secessionists including Kolo Moser and Gustav Klimt, and their wives, collected samples of exotic embroidery and textiles, which may have had a significant influence upon their work. Gustav Klimt's enigmatic combination of floral, organic, and geometric motifs in his portraits or dining room frieze for the Palais Stoclet, for example, may be seen as derived from embroidery patterns that he and his companion, Emilie Flöge, collected.²⁵ Klimt's beloved spiral form, for example, with which he embroidered his famous smock, was standard in much traditional Central European needlework. Furthermore, the rooms arranged by *Wiener*

Figure 13 (right)

"Wiener Kunst im Hause." Room designed for the fifteenth Secession Exhibition, 1902. Photograph published in *Das Interieur IV* (1903): 231. Reprinted with permission of the Oesterreichisches Museum für angewandte Kunst.





Kunst im Hause served as an important precedent for the establishment of the Wiener Werkstätte one year later.²⁶

Marketing Modern Interior Design at the Wiener Werkstaette and in the Popular Press

When the first Wiener Werkstätte showrooms opened in 1904, they adopted the model of the well-furnished home, which had been used by *Wiener Kunst im Hause*. These spaces included soft carpets and armchairs, upholstered in artistic textiles, for customers to relax in while gazing at the elegant glass cabinets displaying modern silver and porcelain wares. Walls were decorated with chic fashion illustrations. Ladies trying on clothing could walk around the shop barefoot comfortably on the soft, felt-covered floors. The stylishly outfitted interiors of the shop encouraged customers, such as Fredericke Maria Beer and Sonja Knips, wealthy patrons of the Secession, to mentally design their own aesthetically coordinated homes, furnished with products ranging from draperies, upholstery fabrics, and carpets to dishes, light fixtures, silverware, and shoes. Beer and Knips both had their portraits painted by Gustav Klimt, and commissioned apartments designed by Josef Hoffmann and outfitted by the Wiener Werkstätte. These patrons enacted the turn-of-the-century "*Gesamtkunstwerk*," in which the domestic living space became a theater of modern life. All spatial and visual elements including the structure of a building, its interior and furnishings, and the costume of its inhabitants were conceived as a single aesthetic statement. The best-known example of the secessionist *Gesamtkunstwerk* is Josef Hoffmann's mansion for the Stoclet family in Brussels, built between 1905 and 1911. The sumptuous dining and music rooms of the Palais Stoclet exemplified the theatrical spaces of the *Gesamtkunstwerk*, celebrating sight, sound, and taste in a symphony of sensual harmonies that paralleled the operas of Richard Wagner, from whom the concept originated (figure 14). In his designs for the Palais Stoclet, Hoffmann was particularly attuned to fashion and to the Viennese identity of the new style of interior, even designing a dress for Madame Stoclet so that she would not clash with her living room décor as she had while wearing a French Paul Poiret gown.

The relationship between fashion and architecture in Vienna is well-documented, and has been of particular interest to scholars of the past decade whose work typically has focused on Adolf Loos.²⁷ Loos wrote a great deal about fashion, and was himself preoccupied with clothing in such a way that the concept of dress constantly informed his architectural designs. Loos's belief that understated dress was the most appropriate disguise for modern man extended to the stark, unconventional façades of his shops and private residences. The subtleties of Loos's interiors, however, reflect his more complicated understanding of architectural space as a garment that allows its inhabitants to psychologically negotiate

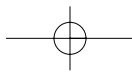




Figure 14
Josef Hoffmann and the Wiener Werkstätte. Palais Stoclet, 1905–1911. Interior view of dining room. Photograph published in *The Studio* LXI (1914): 189 ff. Reprinted with permission of the Oesterreichisches Museum für angewandte Kunst.

their place in modern life. Loos's interiors simultaneously, as George Simmel suggests, allow one to display one's individuality, while assuming a degree of anonymity; they are both public and private; and domestic and urban.²⁸ Although Loos was extremely hostile towards the Secession and the Wiener Werkstätte, especially for the latter's reliance on excessive ornamentation, his understanding of the interior as a form of dress was quite similar to Josef Hoffmann's, and grew out of the same architectural theories of cladding introduced by Gottfried Semper in the mid-nineteenth century, and further developed by Otto Wagner in the early twentieth.

In his essay, "The Principle of Cladding," Loos, repeating Semper's theory, writes:

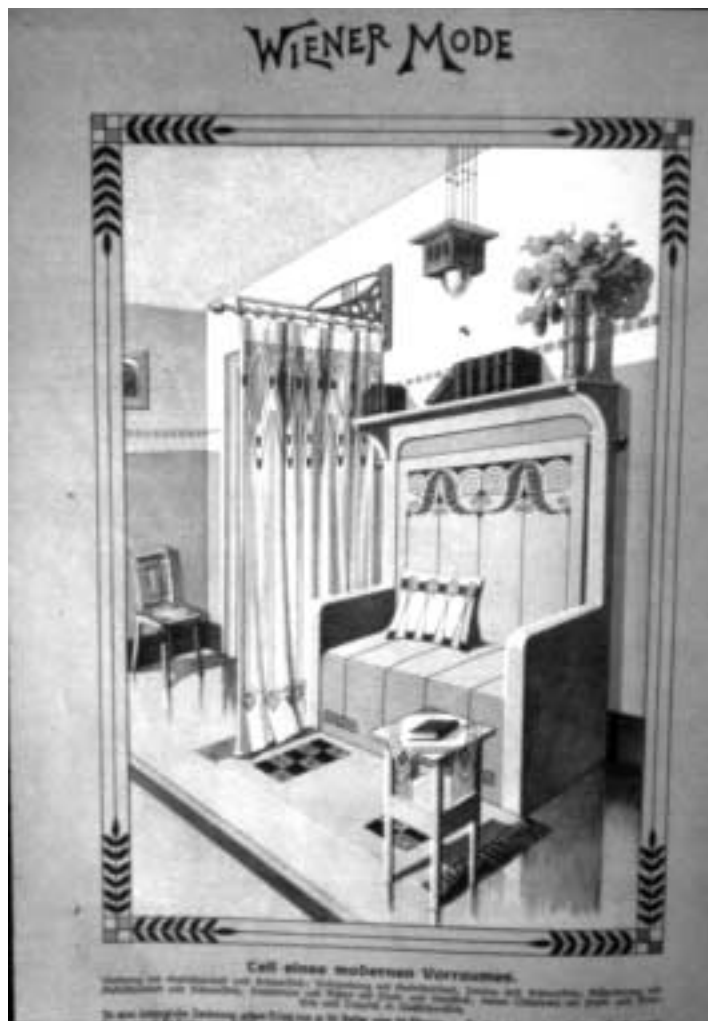
The architect's general task is to provide a warm and livable space. Carpets are warm and livable. He decides for this reason to spread out one carpet on the floor and to hang up four to form the walls. But you cannot build a house out of carpets. Both the carpet on the floor and the tapestry on the wall require a structural frame to hold them in the correct place. To invent his frame is the architect's second task.²⁹

Just as Josef Folsenics called for a "*gemütlich*" Viennese interior, Loos desired a "warm and livable" interior space. This interior must be comforting and sensual, allowing the viewer or inhabitant to

respond to it physically and psychologically. The interior also is a private, domestic, feminine space—a space for intimate conversation, sexual relations, and reproduction. It is a protective refuge from the public space of the modern city, yet it also mediates between the two realms. Different rooms served different purposes; while bedrooms were considered the most intimate and feminine spaces of a private residence, the social space of the dining room and the intellectual space of the library were coded masculine. The salon functioned as a space in which women would socialize while dressed in more relaxed and intimate garments, hovering on the boundary between public and private.

The Wiener Werkstätte's fashionability was the secret of its success. The close relationship between a specifically feminine dressing up in fancy clothes and dressing up the home in a splendid garment had its roots in the national Austrian decorative arts institutions, which fostered and promoted women's traditional textile arts, and recognized women's traditional role in home decoration.

Figure 15
Fashionable interior design, 1909. Published in *Wiener Mode* XXIII/2 (15. October 1909): back cover. Reprinted with permission of the Historische Museen der Stadt Wien.



Around 1908, *Wiener Mode* began to feature embroidery and textile designs for comprehensive room decorations on the back covers of the magazines (figure 15). By this time, the Wiener Werkstätte was well established, and the room designs in *Wiener Mode* reflected the modern aesthetic in their choice of colorful or black and white geometric motifs. On the one hand, the popular interior designs in *Wiener Mode*, which usually were not attributed to a specific designer or design workshop, may be seen as a dilution of the modernist secession style of the Wiener Werkstätte. On the other hand, they cannot simply be understood as the last step in the decline of artistic idea to popular culture. Rather, the popular fashion magazine as a vehicle for perpetuating both commerce and culture already was well in place by the time the Secessionists began to market their new designs through the Wiener Werkstätte. Designers including Josef Hoffmann, Kolo Moser, and their students at the Kunstgewerbeschule responded to this mechanism as much as it responded to them. The design of artistic interiors and furnishings, and the marketing of fashionable goods, must be seen, rather, as a complementary process that allowed both ends to fuel one another creatively.

The modernist interest in textile arts and interior design in Vienna would not have emerged and blossomed as it did had it not been for the constant driving force of fashion, which provided a space for women to engage physically, either as designers or consumers, with the aestheticization of themselves and their living spaces through cloth and needlework. A domestic comfort was recovered in Vienna at the turn of the century by physically wrapping living spaces in pieces of embroidered cloth. The garment—especially the feminine garment—was a common metaphor for the interior living space at the turn of the century. It is important to recognize, however, that this form of feminine dress had as much to do with the idea of “cladding” a space in cloth—a flexible, organic, fiber material—as it did with a particular style or fashion of clothing. Cloth itself has a long history of associations with the feminine, and as Semper interprets it, with our inherent creative tendencies. The textile-based style of interior decoration promoted by *Wiener Kunst im Hause* and perpetuated by the Wiener Werkstätte was derived from women’s traditional handcrafts, which the Secessionists admired, imitated, relied upon, and fostered in their educational programs, publications, and exhibitions.

- 1 The Vienna Secession was comprised of nineteen artists; among them Gustav Klimt, Kolo Moser, Josef Hoffman, and Josef Olbrich; who chose to step down from the exhibiting group of the Vienna Academy of Fine Art in 1897, because of biases they perceived against exhibiting "modern" works both at home and abroad. The Secessionists then built their own exhibition hall, the famous Secession Building, designed by Josef Olbrich (1898), inscribed with the programmatic motto, "To Each Age Its Art, To Every Art Its Freedom." The Secessionists held twenty-three exhibitions between 1897 and 1905, when the original members, the so-called "Klimt group," once again seceded from their own organization. Many histories of the Secession have been written. Among the most useful are Ludwig Hevesi, *Acht Jahre Secession (März 1897–Juni 1905): Kritik—Polemik—Chronik*, Otto Breicha, ed. (1906; reprint, Klagenfurt: Ritter Verlag, 1984); and Carl E. Schorske, *Fin-de-Siècle Vienna: Politics and Culture* (1961; reprint, New York: Vintage Books, 1981).
- 2 The ten students, Jutta Sicka, Marietta Peyfuss, Else Unger, Gisela von Falke, Therese Trethan, Leopold Forstner, Wilhelm Schmidt, Hans Vollmer, Franz Messner, and Michael Powolny; are named in "Wiener Kunst im Hause," *Das Interieur* IV (1903): 28–29.
- 3 One of the most comprehensive monographs on Adolf Loos, which includes accounts of his visits to America and his admiration of American culture is Burkhard Rukschcio and Roland Schachel, *Adolf Loos: Leben und Werk* (Salzburg and Vienna: Residenz Verlag, 1982).
- 4 See, for example, the first in an eight-part series, which ran from August 1892 to August 1893: Jacob von Falke, "Unsere Wohnung. Ihre Verzierung und Ausstattung. Einleitung: Stil und Stilisieren," *Wiener Mode* VI/21 (1. August 1892): 761–763. This essay is modified from von Falke's book, *Die Kunst im Hause: Geschichtliche und Kritisch-aesthetische Studien über die Decoration und Ausstattung der Wohnung* (Vienna: C. Gerold, 1871).
- 5 "Künstler und Hausfrau waren in einer Person vereinigt. So wie die junge Schöne, wenn sie allein war, stundenlang vor dem Spiegel stehen konnte, um in naiver Vertiefung in ästhetische Fragen herauszubekommen, welche Frisur, welche Haltung, welche Bewegungsform ihr am besten steht, so hat sie auch auf dem Wege erfahrungsgemässer Aesthetik allmähig ihr Heim zum reizenden Kleide ihres intimen Lebens ausgestellt," Josef Folsenics, "Das Wiener Interieur," *Das Interieur* I (1900): 3–6.
- 6 "Wer den Typus der echten Wienerin kennt, der weiss, dass im Glanze feuriger Augen, im Rosenschimmer blühender Wangen, in den wichen Welenlinien des lachenden Mundes eine Seele schlummert, die mit der Innigkeit und Natürlichkeit ihres Empfindens allen Sinnenreiz der äusseren Erscheinung wie mit einem warmen milden Lichte überstrahlt. Diese persönliche Eigenart hatte stets die Tendenz, sich auf das ganze Leben zu übertragen, auf den gesellschaftlichen Verkehr, auf die öffentlichen Vergnügungen und vor Allem auf das Familienleben und das echte Wiener Interieur," Josef Folsenics, "Das Wiener Interieur," 6.
- 7 Christopher Long, in his article, "Wiener Wohnkultur: Interior Design in Vienna, 1910–1938," *Studies in the Decorative Arts* (Fall/Winter 1997–1998): 29–51, discusses the Viennese emphasis on domestic comfort, "*Gemütlichkeit*," in the years between the wars as a reaction against the unified, hard-edged, functionalist style championed by the Bauhaus, as well as by Josef Hoffmann and the Wiener Werkstätte. Although the Wiener Werkstätte did embrace a model of interior design based upon unified rectilinear forms, I believe that the workshop's general interest in domestic design, stemmed from the same Viennese desire for *Gemütlichkeit* that Long suggests was at the root of the more popular and eclectic designs by Oskar Strnad and Josef Frank between the world wars.
- 8 Gabriel Mourey, "Round the Exhibition—IV. Austrian Decorative Art," *The Studio* XXI (Oct. 1900–Jan. 1901): 112–113.
- 9 Ludwig Hevesi, "Die Kunstgewerbeschule auf der Pariser Weltausstellung," *Kunst und Kunsthandwerk* III (1900): 117.
- 10 "In anderen aber ist der neue Stil schon lebendig. Die Motive werden aus weniger zertretenen Theilen der Botanik geholt, die Pflanzen mit freierem Auge angesehen und mit einer frischeren oramentalen Laune verwendet," Ludwig Hevesi, "Die Kunstgewerbeschule auf der Pariser Weltausstellung," 121.
- 11 By choosing the title "Ver Sacrum" for their periodical, the Secessionists not only evoked the sacred rebirth of the world in springtime, but also recalled a Roman ritual in which the elders pledged their children to save society in times of national danger. By "seceding" from the exhibiting society of the Academy of Fine Arts, the young artists pledged themselves to save culture from their elders. Their own Secession was based on the Roman model of the *secessio plebis*, in which the plebs defiantly withdrew from the republic, rejecting the misrule of the patricians. See Schorske, *Fin-de-Siècle Vienna: Politics and Culture*, 214–5.
- 12 Dr. A. Riegl, "Die Ausstellung weiblicher Handarbeiten im Oesterr. Museum (März, April, Mai 1886.)," *Mittheilungen des k. k. Oesterr. Museums für Kunst und Industrie* I/6/249 Juni 1886): 115.
- 13 "...in allen Fällen äussert sich in diesen Schöpfungen ein eminentes Stylgefühl und ein naiver, gesunder Kunstsin, der den gebildeten Bewhonerinnen der grossen Städte nicht in allen Fällen von Haus aus eigen ist," Emilie Bach, "Die nationale Haus-Industrie" in *Special Ausstellung weiblicher Handarbeiten im k. k. Oesterr. Museums für Kunst und Industrie. (März, April, Mai 1886.) Führer und Bericht*, (Vienna: Verlag des k. k. Oesterr. Museums für Kunst und Industrie, 1886), 23.
- 14 Gottfried Semper, *Der Stil in technischen und tektonischen Künsten, oder Praktische Aesthetik. Ein Handbuch für Techniker, Künstler und Kunstfreunde. Band I. Die Textile Kunst* (Frankfurt am Main: Verlag für Kunst und Wissenschaft, 1860–1863).

- 15 Today these institutions, which originally were joined, exist separately as the Oesterreichisches Museum für angewandte Kunst (MAK) and the Hochschule für angewandte Kunst in Wien.
- 16 Jacob von Falke, "Die Sammlung von Webereien und Stickereien im oesterreichischen Museum," *Mittheilungen des k. k. Oesterreichischen Oesterreichisches Museums für Kunst und Industrie* 1/2 (15. Nov. 1865): 19–24.
- 17 For an institutional history of the Kunstgewerbeschule, see Gottfried Fliedl, *Kunst und Lehre am Beginn der Moderne: Die Wiener Kunstgewerbeschule 1867–1918* (Salzburg and Vienna: Residenz Verlag, 1986).
- 18 Ludwig Hevesi, "Aus der Sezession. Achte Ausstellung der 'Vereinigung,'" in *Acht Jahre Sezession*, 282–283.
- 19 Today, many of the embroidered works purchased by the Oesterreichisches Museum in 1901, including those mentioned above, are part of the permanent textile collection of the Oesterreichisches Museum für angewandte Kunst (MAK).
- 20 "In allen Classen dieser Schule ragen die weiblichen Kräfte ganz besonders hervor. Sie sind durch langjährige Tradition gerade für die Künste vorbereitet, welche zum Schmuck der Wohnung, zur Verschönerung der Alltäglichkeit dienen," Miss Eddy, "Die Ausstellung der Wiener Kunstgewerbeschule II," *Wiener Mode* XIV/23 (1. Sept. 1901): 969.
- 21 Leopold Bauer, "Moderne Handarbeit im Wohnzimmer," *Wiener Mode* XV/1 (1. Oct. 1901): 18–21.
- 22 Ludwig Abels, "Kunstgewerbliche Ausstellungen (Winterausstellung im Oesterreichischen Museum und im Kunstgewerbeverein)," *Wiener Mode* XV/7 (1. Jan. 1902): 331–332.
- 23 "Wiener Kunst im Hause," *Dokumente der Frauen* VI/17 (1. Dec. 1901): 491–492.
- 24 Alfred Roller, for example, married his student, Mileva Stoisavlirvics; Kolo Moser married his student Dita Mautner-Markhoff.
- 25 Examples of this embroidery collection and an account of Klimt and Flöge's activities together may be found in a number of sources, including, Wolfgang Fischer, *Gustav Klimt und Emilie Flöge: Genie und Talent, Freundschaft und Besessenheit* (Vienna: Verlag Christian Brandstätter, 1987).
- 26 This influence is acknowledged in Werner Schweiger, *Wiener Werkstätte: Kunst und Handwerk 1903–1932* (Vienna: Brandstätter, 1995), 20–22.
- 27 Examples of recent work on Loos's relationship to fashion include: Janet Stewart, *Fashioning Vienna: Adolf Loos's Cultural Criticism* (London and New York: Routledge, 2000); Beatriz Colomina, *Privacy and Publicity: Modern Architecture as Mass Media* (Cambridge, MA and London: M.I.T. Press, 1994); Mary MacLeod, "Undressing Architecture: Fashion, Gender, and Modernity" in *Architecture: In Fashion*, Deborah Fausch, et al, eds. (Princeton: Princeton Architectural Press, 1994), 38–123; and Mark Wigley, "White Out: Fashioning the Modern" in *Architecture: In Fashion*, Deborah Fausch, et al, eds. (Princeton: Princeton Architectural Press, 1994.)
- 28 The German sociologist Georg Simmel makes this point, for example, in his 1904 essay "Fashion" in *On Individuality and Social Forms*, Donald N. Levine, ed. (Chicago and London: The University of Chicago Press, 1971), 294–323.
- 29 Adolf Loos, "The Principle of Cladding" in *Spoken into the Void: Collected Essays 1897–1900*, trans. Jane O. Newman and John H. Smith (Cambridge, MA and London: M.I.T. Press, 1982), 66–69. This passage also is quoted and remarked upon in Beatriz Colomina, "Intimacy and Spectacle: The Interiors of Adolf Loos," *AA files* 20 (Autumn 1990): 5–15.



Brand Identity Development in the New Economy

Jerry Kathman

We are entering a new era, which often is characterized as the “new marketplace.” The new marketplace is made up of new economy brands traded on the Internet and legacy brands from the old economy that are undergoing rapid transformation. There are those who suggest that the role of branding is under assault in the new marketplace.

As identity providers, we would suggest just the opposite. We believe that the role of branding is more vital than ever, and that the specific work of identity development and management has, in fact, become more critical in ensuring that brands in the new marketplace prosper.

An Era of Transformation

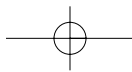
First, we must cite trends that are transforming the marketplace. The breakdown of market boundaries, the liberalization of trade policies, the establishment of tariff-free zones, and the growth of Western-style market capitalism have changed the marketplace dramatically in recent years. The response has included globalization and the development of global brands.

Concurrent with this trend, however, is evidence of market fragmentation. More niche brands and short-life-cycle brands are available to consumers, not to mention product diversity. The buying public is more sophisticated, and has better information to facilitate appropriate purchases, than at any time in modern history.

All of these trends, however, are dwarfed by the full impact of the digital revolution that surrounds business today. The digital revolution trumps all other changes.

The New “Perfect” Marketplace

The economic benefits of the Internet have been evangelized for several years. It is described as a digital utopia, where buyers and sellers will have full information. Therefore, it is said, there will no longer be an information advantage on the part of the seller. Barriers to entry and exit will be greatly diminished. Supply and demand will be in perfect equilibrium.





These are ideas about marketplace utopia that economists have envisioned as highly desirable, well in advance of the development of the Internet. Some economists now turn to the Internet as the mechanism to provide this utopian marketplace. As described in the *Economist*, February 12, 2000, “the Internet’s promise is to gather in the same virtual place, at hardly any cost, lots of information and processing power, and vast numbers of potential buyers and sellers.”

A Time of Unprecedented Convulsions

For those of us living in this era, however, the experience has been something short of utopian. The digital era and the constant improvements in compression technology indeed have resulted in amazing speed and the availability of vast information. It is transforming the way that we procure many goods and services in our lives. However, it also has resulted in disruptions in many areas of the economy such as stock trading, travel, real estate, and book-selling. In many cases, the digital era has shaken traditional assumptions about buying and selling to the core. Even consumer goods manufacturers, an important part of our customer base, are now beginning to see changes in their business model.

The Role of Branding in the “New Marketplace”

Is there a role for branding in the new marketplace? With the rapid changes we are witnessing, will the assumptions about the value of brands remain? In other words, does branding really matter in the digital era?

Evidence in the new economy would suggest that brands remain important. The emergence of new brands such as eBay, Netscape, Yahoo, Amazon.com, and others confirm that branding is paramount in the new economy.

The new economy, it seems, will adhere to the notion first noted by Sir Hector Lang, chief executive officer of United Biscuits, PLC, when he said, “Buildings age and become dilapidated, machines wear out, people die, but what live on are the brands.” We believe that brands will thrive in the new marketplace because consumers continue to demand them.

As noted by Paul Temperall in his book, *Branding in Asia, 1999*, consumers like brands because they generate choice, simplify purchase decisions, offer quality assurance, and reduced risk. Further, brands help us with self-expression, and even offer friendship and pleasure. In short, brands provide trust.

Behaviorists suggest that trust is a natural response to complexity. In this age of complexity and convulsion, therefore, brands have a unique opportunity to thrive.

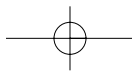


Figure 1

In the past, great products made great brands. All images supplied and reprinted with the permission of LPK.



Makers and Marketers

Historically, great products made great brands. Here are two shining examples:

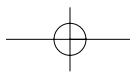
Heinz pickles, first marketed in 1869, is the foundation for the global food business today. Henry Heinz perfected pickling and preserving, and offered many more than his famous “57 varieties” of great products. People quickly trusted Heinz’s pickles and still do today. The product became the brand.

In the early days of Hollywood, Max Factor developed pan makeup that he had to reformulate each time film speed was improved. His ability to capture radiant beauty in the close-up shots resulted in consumer demand for the product at retail. Today, Max Factor is a global leader in color cosmetics. Once again, a great product created a brand promise.

Figure 2

If you don't invest in the brand as an asset, you lose market share and leadership.





Brand Longevity

Not all products thrive, however. In the case of motorcycles and soft drinks, the category leader in 1923 remains the leader today. Harley Davidson and Coke are the powerhouse brands. Many other category leaders tell a different story. Arbuckles' Yuban was the category leading coffee brand, and Douglas Shoes were king in 1923. Folgers, today's number one brand, was a modest regional business, and Nike, of course, was fifty years away from its creation.

The perilous position of brands has been pointed out by Professor Peter Golder, NYU Stern School of Business, who noted that most of the leading brands in 1923 are no longer leaders today. In addition, a recent article in the business section of the *New York Times* suggested that many of our famous brands today are on death row.

These observations support the conclusion made by a number of important studies: If you don't invest in your brand as an asset, the brand eventually will lose its share and leadership. The business of investing in brands, described in marketing terms as "building brand equity," requires a great deal of effort and financial resources.

The Ascendancy of Expression

Product innovation, compelling advertising, and public relations are among the tasks needed to define a brand proposition and to create equity. Increasingly today, the role of the designer is recognized as integral to the work. Expression has become a critical brand differentiator.

As Professor Bernd H. Schmitt notes in his book, *Experiential Marketing*, "In the world in which brands rule, products are no longer bundles of functional characteristics, but a means to provide and enhance a user's experience. The traditional paradigm was that communicating brand features and benefits constituted effective marketing. The world of today suggests that marketing must support sensory, effective, and cognitive experiences for consumers." In other words, Professor Schmitt states, "Brands are experience providers." We believe that visual expression delivers an essential dimension of the experience.

Products and Brand Experiences

There are many examples of the role of design in the new brand-building paradigm. Engine lubricants, computer software, shampoo and conditioning products, and diapers would not, on the surface, seem to be candidates for a visual expression of a brand experience. Valvoline, IBM, Pantene, and Pampers, however, are vivid examples of brand expressions that capture experiences. As Professor Schmitt notes, "Consumers want to be stimulated, entertained, educated, and challenged." The designer is the resource for the expression of the experience.

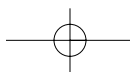




Figure 3

A balance of therapy and beauty is the designer's objective in creating the Pantene experience.

Designing and Branding

If we believe that the new marketplace accepts and, in fact, demands brand franchises, what is the designer's role? Is there a unique opportunity for design in creating brand experiences? If so, upon what evidence should designers make their case?

History and behavioral science help to form the argument that the role of the designer is in its ascendancy in the new economy.

The Brand Management Revolution and the Self-Selection Revolution

Ground zero in the brand management revolution is Cincinnati, Ohio. Procter & Gamble Co., in a famous memo in 1931, articulated the principles of brand management focusing on research, development and communication. Brand management was born.

This brand management revolution was underway when an equally dramatic phenomenon appeared in the marketplace. The grocery store was being replaced by the larger-format supermarket.

Package goods manufacturers, such as Procter & Gamble, suddenly found the dynamics of selling changing around them. Purchase selection suddenly was in the hands of a transformed consumer. The grocer was replaced by the supermarket manager. The manager was busy aisles away, attending to a variety of other issues. Brands were on their own. Packages had to persuade.

Branding in the Self-Select Environment

Package goods manufacturers were early adopters of the principle that strong brand identity supports growth. Brands in self-select

environments needed to support the brand recognition by delivering what soon was characterized as shelf impact.

Further, manufacturers began to understand the need to create, beyond impact, an image or character for the brand through visual expression. Softness, strength, fun, efficacy, or a myriad of other moods had to be visualized by the designer.

Additionally, packaged goods brands had to deliver important information within appropriate hierarchies in order to facilitate the selection process. The designer's role suddenly was strategic. Image and information were required at the self-select point of purchase.

Behavioral Science and Design

Package goods companies turned to behavioral scientists to help them understand this new world. The package frequently was subjected to behavioral research qualification as part of a product launch. In the 1930s, Louis Cheskin formed his "Principle of Sensation Transference." His research suggested that we assign expectations about products we use based on the design, color, and shape of the packages or bottles that contain them. The promise of taste, efficacy, and quality in the self-select environment was suddenly in the hands of the designer, and not the rapidly disappearing sales clerk.

Figure 4

A more joyful and genuine expressions has replaced a more passive image for Pampers.



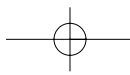


Figure 5
By virtue of color and composition, Valvoline expresses performance at the track.

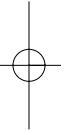
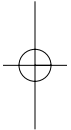
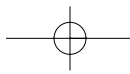


Figure 6
Warmth and humanity are now part of the IBM design franchise for consumer products.

The Age of Packaging-Centric Design

The self-select environment and early learning in consumer behavior led to a packaging-centered world for consumer goods manufacturers' efforts. Packages became brand icons. Package design created not only brand image, but also contained brand aspirations and brand values. The traditional assumptions of the era required two things-massive television presence and strong shelf presence. Mrs. Olson shamed our mothers into buying Folgers through her ubiquitous presence on afternoon television. Five feet of bright-red Folgers cans greeted them when our mothers walked down the coffee aisle in the supermarket.





Figures 7 and 7a

Facilitated sale or self-expression? In Boots, a British health and beauty retailer, an attendant facilitates the Max Factor sale. In North America, Max Factor is found in self-select venues



The Growth of the Self-Select Environment

In the past twenty years, the self-select environment has expanded dramatically. Hardware stores have been replaced by home centers. Large-format stores for automotive parts, software, sporting goods, and many other products offer brands for sale in environments devoid of personal assistance. Soon, companies such as Microsoft, IBM, Valvoline, and others wanted to know what the supermarket package goods manufacturers knew.

A new understanding of the role of brand identity suggested that the benefits of strong branding far exceed the narrow interpretations of the previous age. Strong brand identity increases any brand for consideration. It facilitates customer retention and loyalty and it allows for quicker new product acceptance. With this new realization that a brand is an experience, we know that customers shape the brand. The designer must expand the principle of sensation transference to include all consumer touch points—well beyond the narrow packaging-centric world.

The New Branding Theatre

The designer is required today to understand a dramatically expanded theatre for brand identity. The need for in-store branding, via packaging and merchandising, is as important as ever. Direct-to-consumer communication also must involve careful management of design assets. Mass media remains important, but interactive media now must accept the principles of effective brand identity.

Brands across a variety of goods and services today understand that managing identity at all consumer touch points is essential to their survival and prosperity. Brand identity development is now media neutral. We no longer simply design a package for consumer products. Rather, we create a franchise of color, shape, textures, and typography to serve a brand in all applications.



Figure 8
The reflect.com customer creates her own brand experience on-line.

The designer must understand all executional requirements and think of identity as assets banked in a visual database. We must enable deployment across all media and geography, in order to fully actualize the potential of identity management in the service of brands.

The Internet—the Ultimate Self-Select Environment

We now are witnessing the emergence of a new consumer goods model that more fully exploits a unique commercial benefit of Internet-based transactions. This phenomenon will challenge even today's progressive ideas about fully actualized identity management.

We are experiencing early evidence of a new dimension of empowerment for consumers in the new economy. The Internet is becoming the ultimate self-select selling environment. The potential for customization provides an exhilarating difference that online transactions create for consumers. For example, Reflect.com advances the concept of empowering self-selection to a new level through customization.

The Active Ingredient is the Consumer

Reflect.com is the world's first interactive beauty company on the Internet. Unlike other sites which are simply distribution points for brands that are known and loved elsewhere, Reflect.com allows women to create their own haircare, skincare, and cosmetics products. The consumer answers questions about taste and lifestyle,



Figure 9
Reflect.com states, "You define, your design, your decide."



Figure 10
Bottle shapes are selected by the customer.



Figure 11
Accent designs are selected for the bottles by the customer.

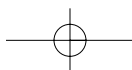




Figure 12

The collection of purchases chosen and designed by the customer appears as she created them.

explores categories of items, and then proceeds to design her own products and packages.

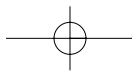
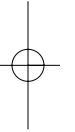
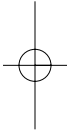
The designer's role is transformed because of the newly empowered consumer. As designers, we create a menu of options and the consumer selects. After creating a customized shampoo formula, the consumer chooses bottle shapes and dispensing options (pump, flip-top, or screw-top). She then decorates the bottle from a series of choices that reflect her aesthetic expression. The design choices presented to her for consideration are based on information about her provided in the question-and-answer section of the Website. Along with product formulation empowerment comes a customized, self-selected expression. The experience is wholly actualized by the consumer. The designer enables choices, but does not control the final composition. Reflect.com is finding that the customized expression component of their business model is a powerful tool. As designers in this model, we have to redefine our role from one of leadership to facilitation. Many brands in many consumer goods categories could adopt this business model.

A Revised Outlook for Identity Management

Identity management still is in its ascendancy. Brands will remain critical to the selection process. However, brand managers and designers have to learn the nuances of serving a newly empowered



consumer. We believe this will lead to more satisfying and rewarding work for identity practitioners. We know this will create a new relationship between the designer and the newly empowered, self-selecting, self-expressing consumer.



Industrial Design in Indonesia: Education, Industry, and Policy

Sulfikar Amir

Introduction

It is quite clear that industrial design initially emerged in developed countries. When it was imported by so-called developing countries, the development of industrial design experienced a different path from that of developed countries due to the economic, political, and social differences.¹ In spite of these differences, it presumably is acceptable that industrial design cannot be separated from the context of industrial development, both in developed countries and developing ones.

From this standpoint, a discussion of industrial design in Indonesia is interesting since this country has some characteristics that are relevant to industrial design development. Situated in the archipelago between Asia and Australia, Indonesia is the fourth-most populated country in the world. With 210 million people, it is considered a potential market for industrial products and, consequently, a promising place for industrial investments. Since Indonesia began its national development program, transforming its economy from an agricultural base to an industrial base, it has seen an economic growth of seven percent per year for more than thirty years, with 25.5 percent of the gross domestic product contribution coming from the manufacturing sector in 1997. This has made the country one of the most important markets in the world.² In Indonesia, the government played a strong role in all economic decision making. This condition certainly is relevant for industrial design, since its development is partly influenced by government policy.³

Economic and Industrial Development

Historically, industrial development in Indonesia began in the 1930s, when the Dutch occupied Indonesia. After the colonial era, which ended in 1945, the industrial sectors, however, did not experience any significant growth since the government at the time was more concentrated with political aspects.⁴ In 1966, the New Order regime took over the government and began a program of economic rehabilitation. Mostly influenced by American-educated economists, the government initiated industrial development.

Mari Pangestu divides the New Order government era into four periods according to the economic condition and the government's roles in industrialization.⁵ The first is called the stabilization and rehabilitation period. During this time, the government

- 1 Gui Bonsiepe, "Developing Countries: Awareness of Design and the Peripheral Condition" in *History of Industrial Design 1919-1990: The Dominion of Design* (Milan: Electa, 1991).
- 2 Jeffrey E. Garten, *The Big Ten: The Big Emerging Markets and How They Will Change Our Lives* (New York: Basic Books, 1997), 11–12.
- 3 Jacques Giard, "Canadian Design and the National Agenda: Toward the Year 2005," *Design Management Journal* 7:3 (1996): 28.
- 4 Thee Kian Wie, *Industrialisasi di Indonesia* (Jakarta: LP3ES, 1996), xx.
- 5 Mari Pangestu, "Pengantar." in T. K. Wie, *Industrialisasi di Indonesia* (Jakarta: LP3ES, 1996), xxi.

attempted to recover the macro economy by launching deregulation in international trading and the exchange system.

The oil boom marked the second period, from 1973 to 1981. With a large amount of money from oil revenues, the government fostered industrialization by launching an import-substitution policy, by creating new investment rules, and by establishing new state-owned companies.

The dramatic drop in oil prices during the 1980s marked the third period. At the time, the government was responsible for a number of ambivalent policies. Many large projects were abandoned, but the protection policy remained in existence.

It was not until 1986 that the government anticipated the critical nature of the situation. This is when reorientation, the buzzword in the fourth period, took place. It emphasized the improvement of industrial efficiency and competitiveness. The government began to overlook domestic markets and to focus on export ones. Soon afterward, the government launched a set of deregulation policies in order to positively stimulate the market and investments.

In addition to Pangestu's chronological divisions, two problems challenged the Indonesian economy in the 1990s. On the one hand, the General Agreement on Tariffs and Trade (GATT) and other similar agreements forced Indonesia to open its market. On the other, the contribution of Indonesian products to the world market, mainly textile and wood, was still very low, around 0.51 percent in 1997. Wie's study revealed that the problem was rooted in the low competitiveness both in productivity and innovation.⁶

National Competitiveness

The low level of competitiveness, particularly the lack of industrial innovation, was the main problem for Indonesian industry entering the 1990s. The effort to improve national competitiveness initially came from B. J. Habibie, the former Minister of Research and Technology. He promoted high technology as the accelerator of economic growth, with the assumption that mastering technology should begin from the top.⁷

With his strong political influences in the New Order government of the 1990s, Habibie dominated economic policy by accentuating the competitive advantage concept, as opposed to the comparative-advantage idea advocated by most economists before him. Nevertheless, Habibie's high technology program received much criticism from economists. It was said that the program was only burdening the economy instead of increasing economic growth. This was because the program was extremely costly on the one hand, yet had no significant result for the economy on the other, something that made the government run under a deficit budget.⁸

However, reference to Habibie's policy is relevant to the development of industrial design in Indonesia. In spite of faults from the point of view of economists, Habibie's programs impacted

6 Thee Kian Wie, *Industrialisasi di Indonesia*, 223.

7 Bacharuddin J. Habibie, *Ilmu Pengetahuan, Teknologi, dan Pembangunan Bangsa: Menuju Dimensi Baru Pembangunan Indonesia* (Jakarta: CIDES, 1995), 90.

8 Kwik Kian Gie, *Analisis Ekonomi Politik Indonesia* (Jakarta: Gramedia, 1994), 19.

industrial design because it was to be utilized more intensively in industry, particularly in high technology-based industries. Eventually, Habibie's programs shaped the course of industrial design in the 1990s.

Industrial Design Education

Industrial design education in Indonesia was rooted in art education at the Institute of Technology Bandung (ITB), the oldest university of technology in Indonesia, founded by the Dutch government in 1920. In fact, ITB design education initially began in 1957 at the time when the university offered an interior design program. It was not until 1972, however, that the industrial design program began, after two ITB art and design educators, Diby Hartono and Imam Buchori, who had been studying industrial design at the Rhode Island School of Design (USA) and the Danish Royal Academy of Fine Art (Denmark), returned from abroad.

During its first years, the industrial design program was based on arts and crafts. Two factors influenced this situation. The first was the dominance of an aesthetic paradigm from the Dutch lecturers on the faculty as Buchori explains:

The Dutch lecturers (who were mostly brilliant artists and art theorists) taught art criticism, academically based on references of history and the sociology of art, as well as modern aesthetics. However, in reality, design education at the time had more emphasis on the aesthetic element rather than the method of problem solving, which then was practiced in Europe.⁹

The second factor was the consideration that Indonesian industry was still in its early phase and, presumably, did not yet require industrial design.

Within an art atmosphere, ITB's industrial design program became the model for programs elsewhere. In the late 1970s, the University of Trisakti in Jakarta followed ITB's lead and opened its own program. For almost a decade, these two schools were the only universities in Indonesia where industrial design was taught.

After the government launched the non-oil export program as a reaction to the fall of oil prices in the 1980s, the industrial design program at ITB, and later at the University of Trisakti, began to include industrial products in student assignments. Getting more enthusiasm from students, educators quickly turned to industrial-based products and included technological components in the curriculum to balance the aesthetic ones. From that point, industrial design education pointed toward a new direction in which the industrial elements were joined with aesthetic ones. Later, this direction was the basis for the industrial design program at the Institute of Technology Sepuluh November (ITS) in Surabaya, which opened in 1986.

9 Imam Buchori, "The Design Education in Developing Countries: Case Study of Indonesia." Unpublished Paper, Institute of Technology Bandung, (1996): 2.

The number of industrial design courses increased in the 1990s when several private universities in Jakarta and Bandung started their own programs. This was because the demand for industrial designers had increased greatly. Concurrently, the desire of high school students to study industrial design also increased. In 1998, seven universities in Jakarta, Bandung, and Surabaya had industrial design programs.

The first graduate program in design opened in 1989 at ITB. Following this, in the 1998 curriculum, ITB industrial design professors started to implement research-based pedagogy, which included topics such as semiotics, design management, and ecological design. These additions to the curriculum were implemented after some ITB educators came back from their studies abroad and joined others who had completed their graduate studies at ITB. Besides, the nature of ITB as a science and technological university had firmly influenced its industrial design program to incorporate scientific approaches to the design process. This was presumably a strategic move undertaken in order to produce knowledgeable industrial designers with managerial and research skills. The development of industrial design education is illustrated in figure 1.

Even though the number of industrial design programs in Indonesia continues to grow, it is still small compared to the growth of industry. According to Industrial Statistics reported by the Indonesian Ministry of Trade and Industry, in 1995 Indonesia had 2,157, 805 small-scale industries and 21,415 medium and large-scale industries. If every industry requires at least one industrial designer, then thousands of industrial designers are needed, which means more industrial design education programs need to open or the existing ones will have to be expanded.

Figure 1
Chronology of the economic events that have influenced the development of industrial design education.

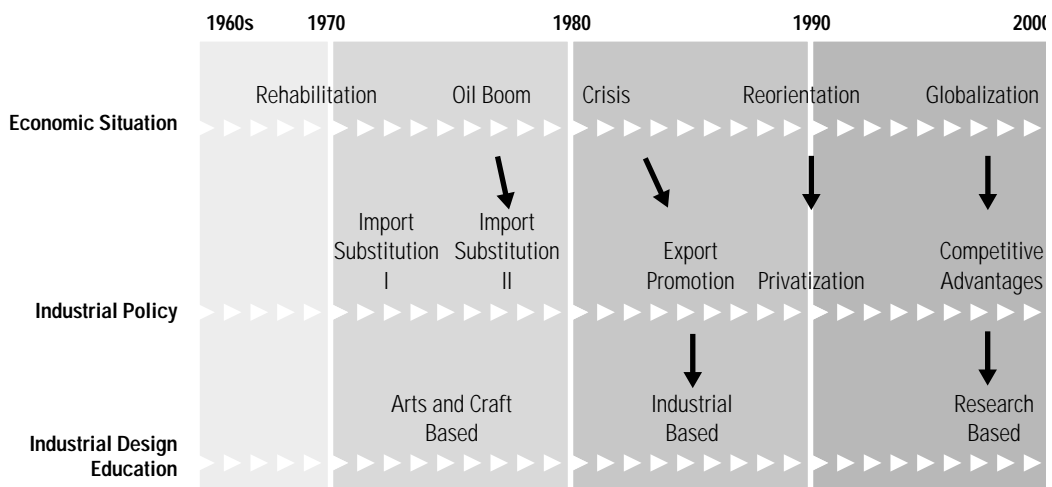
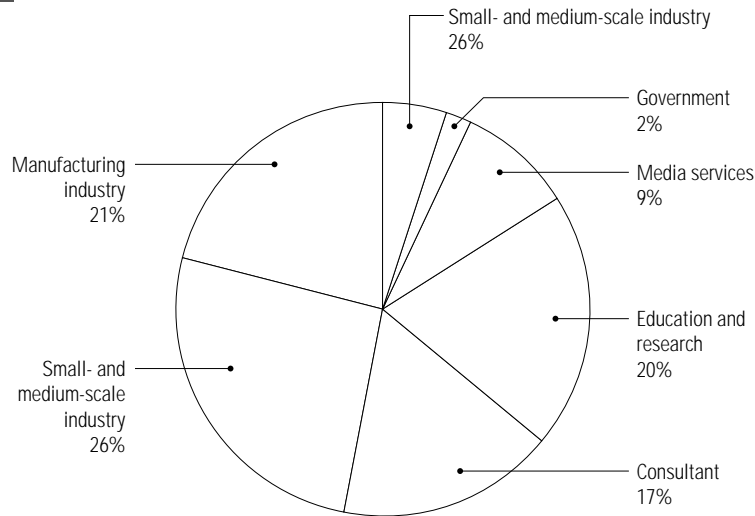


Figure 2
The composition of industrial design graduates employment.



Industrial Design and Industry

Currently, there are approximately three-hundred and fifty university graduates in industrial design working in various fields. A survey undertaken by the author¹⁰ reveals the composition of the fields as represented in figure 2.

About twenty-one percent work as in-house designers for manufacturing industries such as electronic, vehicle, aircraft, telecommunication, and home appliances. Another twenty-six percent work for small and medium-scale industries either as the owner or the designer. These small and medium-scale industries include furniture, leather products, wood and rattan products, ceramics, and gifts and souvenirs. Another seventeen percent have established or work for design consultant offices. Yet another twenty percent work for both public and private universities in education and research. Media services such as Internet service providers, television stations, and mass media (nine percent), two percent are in government agencies—particularly the Department of Trade and Industry—and 5 percent are in the trading and travel business. This section focuses on two fields: manufacturing and small-and medium-scale industry.

Between the 1970s and the 1980s, more industrial designers worked in small-and medium-scale industries than in the manufacturing industry. Two factors were responsible for this situation. First, the arts and crafts-based focus in industrial design education led many graduates to work in related fields such as craft-based industries. Second, and as stated earlier, industry was still in its initial phase, focusing more on building infrastructure. It did not need product development.

When the government started export promotion in anticipation of a heightened economic crisis after the fall of oil prices in the 1980s, industrial design graduates began to enter manufacturing

10 Sulfikar Amir, "The Development of Industrial Design in Indonesia: A Case Study in the Electronic Industry." Master's thesis, Arizona State University, (2000): 40.

industries. Two factors produced this situation. First, the change of focus in the education system enabled industrial design students to gain more knowledge of industrial products. This better prepared them to enter industry. Second, the government's recommendation for industry to open research and development (R&D) divisions created a place in which industrial design graduates could pursue a career. Nevertheless, the road for industrial design graduates was not a smooth one. At the time, the impact of most industrial designers was on graphics and applied decoration. This was because the perception of industrial design was still strongly associated with fine arts, a perception that hindered industrial designers who wanted to be involved in product development.

Gradually, industrial designers gained more opportunities and better positions. They moved from graphics and decoration to the product creation process. Two factors influenced this situation. First, industrial designers had shown the positive impact of their work on the company's business performances. Second, the competition in the market compelled manufacturing companies to enhance their capabilities in new product development, particularly in the design factor.¹¹

From this perspective, it is possible to develop a profile of industries in Indonesia that employ industrial designers, and to see their acceptance of industrial design. Similar to Bonsiepe's categorization of industry in peripheral countries,¹² there are four groups of corporate industries in the composition: multinational corporations (MNC), private local corporations (PLC), state-owned corporations (SOC), and small-and medium-scale enterprises (SME).

The first group, multinational corporations, consists mostly of capital intensive, relocated industries coming from countries where the labor costs are so high that it makes production no longer feasible. Two economic reasons persuaded these corporations to come to Indonesia. First, they were attracted by cheap labor, and, second, they were impressed with the potential market of Indonesia quantitatively. In fact, some of these corporations employ local industrial designers in order to adapt their products to local needs. However, they seldom allow local industrial designers to develop totally new products. Indeed, the government's rules oblige these corporations to have local investors involved as joint partners. Unfortunately, technology transfer, including industrial design development, is not on the agenda of local investors. They do not really care about technological development and industrial design. As a result, industrial design in these corporations plays only a minor role.

The second group is the private local corporations (PLC), mostly capital-intensive industries. This group can be divided further into two groups. The first consists of corporations that are unwilling to hire industrial designers for two reasons: they presume that doing product research and development, which are the duties

11 Sulfikar Amir, "Pengembangan Konsepsi Manajemen Desain Produk Industri Berdasarkan Analisis Variabel Desain." Undergraduate thesis, Institute of Technology Bandung, (1996): 128.

12 Gui Bonsiepe, "Precariousness and Ambiguity: Industrial Design in Dependent Countries," in Julian Bicknell and Liz McQuiston, *Design for Need: The Social Contribution of Design* (Oxford: Pergamon Press, 1977), 15-16.

of an industrial designer, is costly and uncertain. Thus, they do not want to take risks for product development. And, because there still is no legal protection for industrial design, it is possible for this group to freely copy the designs of existing products in the market. Hence, instead of spending money on hiring industrial designers to design their products, this group uses plagiarism as a means to minimize investment.

The second group of PLCs consists of those companies willing to hire industrial designers. The aim of industrial design in these corporations relates to the strategy of product modification. It seems that what Alpay Er revealed about the function of industrial design in product modification in the Newly Industrialized Countries (NIC), industry can be found in these corporations.¹³ However, product modification in PLCs is not only to reduce cost, which is what occurred in the Asian NICs, but also to adapt to local demands, as was the case in the Latin American NICs. Industrial design found its place when these corporations began to develop their own brand, and built research and development divisions.

The high-profile mission for technology development can only be found in the third group or state-owned corporations. As mentioned before, after Habibie began to promote high technology-based industry, the pursuit of technology development was undertaken in state-owned corporations under his authority. Through the Agency for Developing Strategic Industries (BPIS), Habibie embraced the aircraft industry; the heavy equipment industry; the electronics and telecommunication industry; the explosive, military, and precision industry; the maritime industry; the land transportation industry; the material industry; and the biotechnology and petrochemical industries.

Certainly, not all of these industries needed industrial designers. However, it seemed that more positions opened for industrial designers when a number of them entered these high-tech-based industries such as the aircraft, electronics and telecommunication, heavy equipment, and land transportation industries. The Indonesian Aircraft Industries (IPTN) in Bandung represents a good example of how industrial design can play a major role. This company has about fifteen industrial designers working in various positions such as staff industrial designer, department head of the ergonomics laboratory, department head of industrial design, department head of product modeling, deputy of product research and development, and head of the aircraft interior division. Even though the number of industrial designers in this company is not comparable to the number of engineers or the management staff, it showed how industrial design was well accepted in the high technology environment.

Nationalism definitely is the most influential factor that has allowed technological development, including industrial design, to grow in state-owned corporations. However, there is a fault in this

13 Alpay Er, "Development Patterns of Industrial Design in the Third World: A Conceptual Model for Newly Industrialized Countries," *Journal of Design History* 10 (1997): 297.



situation since these corporations are highly politically intensive, which means they are very sensitive to political change. It is common in Indonesia that, once the government changes, the policy also changes. Consequently, the position of industrial design is fragile unless these corporations are separated from government involvement.

Finally, the fourth group consists of small-and medium-scale enterprises (SMEs). Even though Bonsiepe sounded unsympathetic to SMEs for their artisan nature, one may not ignore the potential contribution of this sector to industrial design development in Indonesia. It has been the largest area for industrial designers. While it is rare for large-scale industrial corporations undertake research and development, SMEs provide an area for industrial designers to undertake product development. As a matter of fact, the number of SMEs is much greater than large-scale industries.

The aim of industrial design in SMEs is not only product development, but also job creation. This especially is the case because most industrial designers in this sector are designers as well as owners. Even though the content of technology in this sector is not as great as in large-scale industries, it does not necessarily mean that industrial design is relegated to a merely artisan nature, because industrial designers in SMEs have to consider many factors, from production to marketing. This provides them with a more challenging role.

Government Involvement: The Design Center

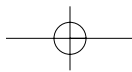
Qualitatively, industrial design has evolved from a trivial discipline to a significant one in Indonesian industry, even though the number of industrial designers still is low compared to the number of industries. However, industrial design could have a better future if the government, as policy maker, provided political support as Giard says:

Clearly, industrial design did not and could not exist in a contextual vacuum. In fact, it never has. Industrial design has always been an integral part of the greater picture of a nation, a picture that includes the political system, the economic model, and the cultural milieu.¹⁴

What Giard stated implies that the government—whether it is reactive or proactive in its policymaking—can never affect industrial design in a neutral way. The Japan Industrial Design Promotion Organization (JIDPO) is a good case study of how government can become involved in promoting industrial design in order to improve the industrial competitiveness. South Korea is another example. Under the Ministry of Trade, Industry and Energy, the Design Policy Division was established in 1996. It has taken charge of setting and implementing design promotion policy in strategic tasks.¹⁵ Indeed, promoting industrial design in industry does not

14 Jacques Giard, "Canadian Design and the National Agenda: Toward the Year 2005," 28.

15 Kyun Won Chung, "Strategies for Promoting Korean Design Excellence," *Design Issues* 14:2 (1998): 13.



necessarily only come from the government. Some models in other countries show that the policy of design promotion also can be initiated by the private sector. However, considering that the government has a strong position in the Indonesian economy, it needs to trigger the policy to get optimum results.

As a matter of fact, the effort of promoting industrial design to Indonesian industry through a design center has come a long way. It can be traced back to the time when an ITB design faculty team was assigned by the government to design and build Indonesia's pavilion for Expo 70 in Osaka, Japan. More important, the task was not going to be a mere aesthetic challenge, because the team had a mission to present a positive image of Indonesia which, at the time, was just starting a national development program. The project was done with such success and was so impressive that the government realized the importance of design,¹⁶ particularly industrial design, because of its direct connection to the industrialization process.

Since then, a number of seminars and workshops have been conducted on industrial design, such as that held in 1974 by the Ministry of Industry. Following this, Prof. Carl Aubock (from Austria), the former president of the International Council of Societies of Industrial Design (ICSID) in 1975, was invited by the Ministry of Trade to conduct a study on the potency of Indonesian design. The study was endorsed by the United Nations Industrial Development Organization (UNIDO). From his study, Prof. Aubock wrote a report entitled "Indonesian Design 1975," which contained a recommendation to establish an Indonesian design center. The same recommendation came from a meeting called "The First Meeting of ASEAN Experts on Design and Crafts," held by the Ministry of Education and Culture. Based on its recommendations, a national seminar on a design center was held in 1977, in which the Japanese designer, Dr. Kenji Ekuan, the ICSID president at the time, was invited to speak about the importance of such a center. Unfortunately, by the 1980s, it had yet to be built.

A turn of events occurred in the end of the 1980s, when the government formed a ministry to deal with the increasing utilization of domestic products, in order to anticipate imported products. This policy change occurred when the government gradually removed its protection policy. The ministry commissioned ITB staff to conduct a feasibility study for a design center with specific attention to three aspects: institutional function, facilitating resources, and programs and processing. The study lasted a year and culminated in a very important recommendation on the position, the location, the functions, and the financing of the design center. Unfortunately, the proposal was ultimately abandoned as the ministry was disbanded in the next presidential cabinet.¹⁷

16 Solichin Goenawan, "Desain di Indonesia," in Agus Sachari *Paradigma Desain Indonesia* (Jakarta: Rajawali, 1986), 68.

17 Imam Buchori, "The Design Education in Developing Countries: Case Study of Indonesia," 4.



The prolonged procrastination surrounding the design center was the result of two factors, as Buchori indicates:

The expectation to realize the idea of establishing the design center always has been stumbled by bureaucratic problems, which overly tend to see design from individual interest. This is the first reason. The second is due to the lack of awareness of the design strategic role in a macro economy. Moreover, there is insufficient support from the industrial community, particularly those bound to the investment agreement where design policy is under their counterpart.¹⁸

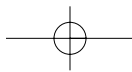
It was not until 1996 that the Indonesian Design Center (PDN) was finally established under the auspices of the Ministry of Cooperative and Small Medium Enterprise (SME) Development, following the establishment of the Indonesian Design Council in September 1995. The center is expected to implement design promotion measures on the basis of policy direction recommended by the Design Council.

The center itself has a role to formulate and conduct programs in order to educate the industry—especially small-medium enterprises—and the public about the importance and the effects of design. The design center's programs mainly encompass human resources, public information, consulting, R&D, quality management, and intellectual property rights, cooperation with design organizations, and the provision of information. However, its operations continue to be dominated by its Japanese counterpart, the Japan International Cooperation Agency (JICA) and the Japan Design Foundation (JDF), both in programming and financing.

The establishment of the Indonesian Design Center, however, was not flawless. Even though several programs were launched pertaining to the promotion of industrial design, its impact on Indonesian industry is still far from the expected one. There are two factors responsible for this condition. First, the Indonesian Design Center did not involve corporate industries in its programs. This is unfortunate because the involvement of those industries is very important since they are the ultimate users of what the design center provides. This involvement could be in the form of investment, provision of information, programming, or problem solving. Without this involvement, the programs will not match the industry's needs.

The second factor has to do with the fact that the Ministry of Cooperative and SME Development, which deals with mostly rural-based low economic cooperative institutions, has not the sufficient political force to deal with corporate industries. This is a disadvantage for the design center. This is not to say that cooperatives and SMEs do not have contexts that connect to industrial design because they do. However, the ministry dealing with this sector is not influ-

¹⁸ Ibid.



ential in matters of industrial policy. This is definitely not an ideal condition for the promotion of industrial design in industries, either in small-medium-scale industries or in large-scale ones. Under the Ministry of Cooperatives and SME Development, the institutionalization of the Indonesian Design Centers can be said to be futile because of industry's low esteem for the ministry. This had hindered the Indonesian Design Center in approaching industry.

The situation could have been different if the design center was under the Ministry of Trade and Industry like its Japanese and South Korean counterparts. The argument is that, on one hand, the Ministry of Trade and Industry certainly provides the Indonesian Design Center with direct connections to corporate industries, either to small-medium-scale industries or to large-scale ones, which enables the design center to function optimally in fulfilling industries' needs. On the other hand, because the Ministry of Trade and Industry is responsible for national industrial policy, the design center could have more opportunities for incorporating industrial design in policymaking. Most of all, this institutional problem resulted from the inconsistent policy of the government, which was, once again, rooted in the lack of appreciation and awareness of industrial design.

Perhaps the only positive action of the government for industrial design pertains to legal protection of industrial design patents. Although it is considered late on the scene compared to other countries, industrial design recently has received government attention, particularly from the Directorate General of Property Rights, Patents and Brands, an agency under the Ministry of Justice. This is because the inclusion of industrial design in the Trade Related Intellectual Property Rights (TRIPs) in the General Agreement on Tariffs and Trades (GATT) has forced the Indonesian government to implement legal protection for industrial design through the "Industrial Design Act." If nothing else, this change has made the government more aware of industrial design.

Conclusion

What this paper shows is that industrial design in Indonesia resulted from an idea that was imported from developed countries. The idea presumably was aimed at supporting the Indonesian industrialization process. However, this had implications for the development of industrial design, where the idea did not meet the ideal reality of industrialization, which was assumed to leave a large space for research and development activity.

Industrialization in Indonesia started from the import substitution policy, which is a common phenomenon in developing countries. However, the ambiguous policies that existed for almost two decades substantially obscured the effort to promote industrial design in industry. And since industrialization in Indonesia appar-

ently built a big wall hindering industrial design from entering, small-and medium-scale enterprises (SME) with arts and crafts bases were the only sectors in which industrial design could be employed.

Nevertheless, industrial design education has at least experienced a growth. Strong evidence for this statement lies in the fact that it evolved from paradigms based on arts and crafts to ones based on industry and eventually research, incorporating scientific approaches. But quantitatively, the number of industrial design programs in universities has not been growing significantly compared to the growth of industry, neither large-scale nor small-and medium-scale. The small increase growth number from two programs in the 1970s to seven in the 1990s confirms this unequal growth.

The factor that indirectly contributed to the beginning of industrial design utilization was the fall of oil prices in the mid-1980s. Pangestu's study shows that this forced the government to gradually open the economy by diminishing the import substitution policy and by promoting export programs. Certainly, this implies economic liberalization, bringing a spirit of market-based competition to the economy.

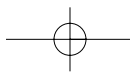
Market-based competition, along with the export promotion, was a momentum for industrial design to develop. The momentum had created a situation in which product development was necessary for industrial corporations to compete. Thus, from this standpoint, industrial design built its path in the industrial process, expanding from solely arts and craft-based sectors as it had existed in previous decade. It seems that what Alpay Er revealed in his NICs studies pertaining to the positive correlation between export programs and the advancement of industrial design,¹⁹ worked in the same way in Indonesia.

Nevertheless, the path of industrial design in the industrial process has not been a smooth one. There were some factors that negatively impacted industrial design. The first was that industrial design was—and still is—strongly associated with fine arts. The misconception of industrial design as a fine art, nevertheless, created a gap between the substance of industrial design and its reality in industry. In this manner, Bonsiepe's indication pertaining to the problem of misunderstanding industrial design as an applied art was true.²⁰ Being strongly associated with fine arts caused industrial design to fall to a marginal role in the industrial process.

The strong dependency on imported technology was another factor that was responsible for creating a gloomy situation for industrial design in Indonesia. Since most industrial corporations were operated by and using imported technology, no space was left for local technology development, including industrial design. This tends to be a political problem since industrial corporations which were original equipment manufacturers (OEMs), did not allow their

19 Alpay Er, "Development Patterns of Industrial Design in the Third World: A Conceptual Model for Newly Industrialized Countries," 298.

20 Gui Bonsiepe, "Developing Countries: Awareness of Design and the Peripheral Condition," 253–254.

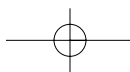
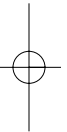
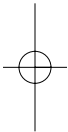


local counterparts to develop technology, including industrial design. Instead, they deliberately perpetuated the dependency in order to keep the market in their hands.

The last factor comes from the actions of the government, which was responsible for the condition that provided no legal protection for industrial design. As a result, plagiarism has been so commonly practiced by local corporations that industrial design has been rendered unnecessary.

The lack of awareness about industrial design was the main problem hindering it in becoming an important issue for the government. It seemed that the government could not accept the correlation between fine arts to which industrial design in Indonesia was strongly associated, and industry. Consequently, this kept industrial design from being included in industrial policies. The problem would disappear if industrial design became associated with technology. From this point, what Bonsiepe suggested that “to be effective, industrial design must be part of a general technology policy, i.e., a set of priorities for technical and industrial development with corresponding allocation resources”²¹ is reasonable. And this could be initiated in the Indonesian education system by including industrial design in technological-oriented schools as opposed to fine arts-oriented ones.

21 Gui Bonsiepe, “Precariousness and Ambiguity: Industrial Design in Dependent Countries,” 17.



Action Research and the Practice of Design

Cal Swann

Introduction

The pioneer design work that was carried out in Europe and America during the first half of this century blossomed in the post-war years, growing in size and prosperity as creative expertise was combined with serious business acumen. One thinks principally of the Bauhaus, together with individuals such as Peter Behrens, Jan Tschichold, Piet Zwart, Alvar Aalto, and Raymond Loewy, as people who instinctively developed a profession out of their design practice. Richard Buchanan has summarized this rapid development as three stages:¹

Design began as a trade activity, closely connected to industrialization and the emergence of mass communication.

After a period of time, professions began to emerge, with traditions of practice and conscious recognition of a distinct type of thinking and working that distinguished our profession from others. However, we are now witnessing the beginnings of the third era of design, marked by the emergence of design as a field or discipline.

Buchanan identifies the trade and professional stages as periods in which education and training inevitably followed industrial practice, a situation that is still the case for most of our schools of design. He also makes an important distinction in the third phase, in that education and industry can become partners, and education might challenge and even lead industry, an aspect to which I will return later.

It is an unfortunate accident of historical timing, but just when the design profession was becoming of age, the “crisis of confidence in the professional” became a major issue of concern.² Lawyers, scientists, teachers, and even doctors came under a barrage of criticism that questioned their expert judgment in a way that had never been dreamed of before. The long-established profession of architecture was not spared this challenge from a more empowered public. The new design profession (based, to some extent, on the concept of a mystical gift to provide creative solutions in a consumer-driven market) also came into question from a public that was (and still is) increasingly demanding accountability and responsibility from the designers of our environment.

1 Richard Buchanan, “Education and Professional Practice in Design” in *Design Issues* 14:2 (1998): 63–66.

2 Donald Schon, *The Reflective Practitioner: How Professionals Think in Action* (New York: Basic Books, 1983).



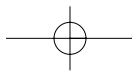
There is much to criticize in current design practice, and the willing contribution that design education has made to that “culture of mystique” in the creative design activity. More important, however, this paper explores research approaches that are more suited to the interpretive nature of design. Central to this, in *The Reflective Practitioner*, Schon formulates an epistemology of practice based largely on an examination of the way in which practitioners reflect on their actions during and following their work. Reflection “in action” and reflection “on action” are key concepts in Schon's scenario. Schon talks about how problems are framed, how a situation can be changed, what norms are given priority and what possibilities are offered, quite intentionally showing a relationship to the design process. Reflection “in action” and reflection “on action” lead to “action research.” This comparatively recent evolution of a methodology of research in the social science field has significant elements that could be assimilated into design practice.

Design Practice and Research

The twentieth century practice of design grew out of an applied art tradition that encompassed architecture, furniture, and interiors to fine book production and poster designs by commercial artists. The designs of individual practitioners such as Josef Hoffmann or A.M. Cassandre are entwined in a fine arts tradition that was bound to an intuitive mode of operation which often was difficult to articulate. In part, due to the propaganda efforts on all sides in the Second World War, more rational methods for making design decisions were developed during the latter half of the twentieth century. In the 1960–70s, there was considerable thinking and writing which had an enormous impact on the concept of the method and practice of design, particularly as related to industrial design areas. The theoretical work of designers coming from an engineering background promoted a “scientific method” to be applied to design problem solving. The works of John Christopher Jones, Bruce Archer, and later, Nigel Cross became the bibles for design theorists and practitioners.³ For more than twenty years, the belief that research in design (or serious study of any kind) should be founded in scientific objectivity and positivist formulas went almost unquestioned.

Scientific positivist ideology fitted in well with the prevailing modernist view of the world of that time. Designers, like architects, tended to take a high-minded approach to the design process (designers still claim ownership of design), and carried with them an implicit attitude that their solutions must be for the positive good of the community. Postmodernist philosophy challenged this dogma and urged a more tolerant and pluralistic approach to what might be good for the end-users. The social sciences brought forth a number of alternative ways to investigate and validate research and information, alternatives that have more affinity with design processes than the science/engineering model.

3 John Christopher Jones and Bruce Archer were notable among the first design theorists of the postwar period. Importing methodologies from the field of engineering, these two protagonists (working largely with the British Council of Industrial Design) applied rational approaches to design that established a basis of research, analysis, synthesis, production, and evaluation. J Christopher Jones's seminal book *Design Methods: Seeds of Human Futures* (1970) and Bruce Archer's *Systematic Methods for Designers* (1965) had a profound impact on this author and many other design practitioners and educators in the '60s and '70s, particularly in the UK. Jones's work was published widely, and also translated into Japanese, Romanian, Russian, Polish, and Spanish. A second edition published in 1992 (Van Nostrand Reinhold) contains fascinating prefaces and reviews of previous editions by Jones, demonstrating the shifts in thinking that occurred over three decades of design development, not least, to Jones himself. Nigel Cross is Professor of Design at the Open University, UK, and has published several books and articles on design methodology. (1990).



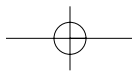


Design is for human consumption and not bounded by the quantifiable “certainties” of the physical world. Of course, materials technology plays an important part in building and mass production. However, it is in the end usage of a designed product that belongs in the social science world. Design deals in human interactions with artifacts and situations that contain a great deal of uncertainty. Design research is tied to a domain that derives its creative energy from the ambiguities of an intuitive understanding of phenomena. And while we may criticize an imbalance of too much self-expressive art within design problem solving, the traditional root of intuition, inspired guesswork, and holistic thinking should not be lost in a revised version that contains rational judgments and processes to ensure an informed intuition.

Design research is not as quantifiable as in science and engineering and “interpretive” research is a form of qualitative research which is better suited to the behavior and sensitivities of human beings, relying more often on insight for the interpretation of human actions. Interpretive research accepts data and findings as containing bias, and that it is inevitable that many human cultural values are embedded in the interpretation of phenomena. This is much closer to the designer’s personal interpretive analysis of problems, and the creation of potential solutions based on individual insight.

It is now generally accepted that there are many forms of interpretive research. The “critical” version is a further development that identifies more vehemently the potential for subjectivity to distort the understanding. Critical research often is applied to throw a spotlight on the vested interests of those who own or commission the research, although it also is recognized that it can liberate the researcher and the researched (Marxist or feminist research, for example, fits into this category). A poststructural or deconstructivist approach takes this debate even further, and sometimes can be accused of denying the existence of any truths. Taking the writings of Derrida and Foucault to their hearts, some “post-people” argue that all discourse contains many meanings, and that the interpretation depends as much on the reader as on the writer. There is a multitude of ways to construct personal knowledge, and a pluralistic approach that recognizes these dimensions is now preferred to the former positivist paradigm that sought to prescribe a universal truth.

There is a place for all these approaches to carrying out research, and there are now Ph.D. and MA students projecting interesting perspectives on varied aspects of design and, thus, also enlarging the field of design. These generally are formulated as traditional theses, and we should have no problem with the written articulation of design, the more the better for a developing field. The thesis is an accessible format that is capable of being read by people outside the design domain and, thus, is a vital channel for the cred-



ibility and external validation of design as a discipline field. It also is important to note that the thesis format does not exclude design projects. In the situation where a hypothesis is to be set up, tested, and observed and conclusions interpreted as in a traditional thesis model, it also can accommodate a design project where the design proposition becomes the hypothesis that is tested. Nonetheless, designers have shied away from this kind of research since it still seems very literally based and designers generally are more comfortable working primarily in visual media.

Visual form (as manifested in a design model) is a valid form of knowledge, albeit more problematic to verbally explain to “readers” not accustomed to seeing and understanding visual/spatial concepts. Visual literacy is the same as verbal literacy or audio (music) literacy—it requires practice and intelligence well versed in the history and concepts embedded in the form for a full interpretation and understanding. New visual forms of expression are based on developments of existing forms, enabling experienced observers to build the new forms into their understanding. A design concept that explores new visual forms to achieve intended outcomes may be immediately “read” by the informed eye, but not necessarily as easily understood by readers of conventional literate forms. Knowledge of semantics, at least in the shape of tacit understanding built from practical experience of spatial form, is a requisite for decoding the implied function that may be expressed through the shape of an object.

Research in design may seek to demonstrate the result of systematic inquiry as a tangible design product. Mike Press⁴ suggests that “A designed artifact is a researched proposition for changing reality.” This is not likely to be contested by designers who can justifiably see their creations as the result of weeks, months, or years of sifting through information and ideas in both verbal and visual forms. However, how designers explain their research in purely visual terms is an issue of considerable debate among academics and practitioners. There exists a fierce defense of the idea that the artifact is sufficient evidence of its purpose and existence, although a majority of academics insist on the visual expression being complemented by substantial verbal explanation.⁵ It is not my intention to review these arguments here. The important point is that visual form is a form of knowledge. It is a means of encapsulating ideas and, indeed, some ideas are expressed more powerfully through the visual medium than via any other form of communication.

The Design Process

In order to relate action research as a compatible methodology for approaching research “for” design, I will briefly review the design process. Literature on the design process is well covered elsewhere, emanating from the works of Jones, et al. I have assumed that we

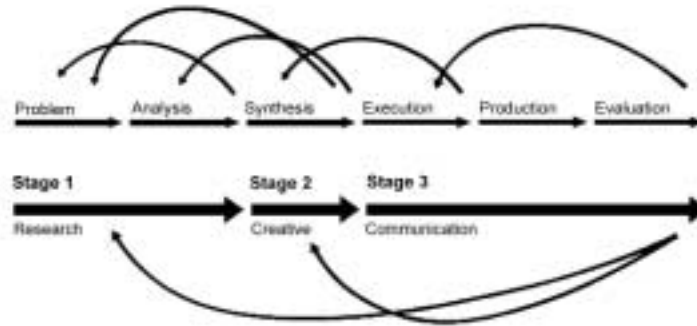
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- 4 Mike Press, “It’s research, Jim...,” Proceedings of the European Academy of Design Conference *Design Interfaces*,” University of Salford, UK, 1995.
- 5 A number of conferences have occurred in recent years that have addressed this concern, beginning with the Ohio Conference in 1998 *Doctoral Education in Design* organized by *Design Issues* and Ohio State University. The follow-up conference in La Clusaz in France in 2000 *Foundations for the Future* continued the Ohio discussion and many more threads conducted by electronic means on the Design Research Society mailing list, now located at: WWW.PHD-DESIGN@JISMAIL.AC.UK. Archive material of the email discussion can be obtained via the Design Research Society at: www.drs.org.uk. A summary of this debate also is available in the School of Design Journal of Curtin University of Technology: Terry Love, “Research and Practice in the University Education of Designers,” *Journal* 5 (Curtin University of Technology, Perth, Australia).

share a consensus view of the basic elements along the following lines:

Problem/research – analysis – synthesis – execution – production – evaluation.

In such broad outline, it clearly follows a familiar research process that primarily is empirical, but more important, it is not linear as the above suggests. The design process is iterative. It can only be effective if it is a constant process of revisiting the problem, re analyzing it and synthesizing revised solutions. A more descriptive model is provided in Figure 1:

Figure 1



Research might be simply regarded as an early stage in design, but the significant difference to research per se is emphasized in that crucial moment of synthesis, when all the problem parts are brought together in a holistic solution. The difference between the scientific method and the designers' approach to problem-solving is summarized by Nigel Cross:⁶

A research study by Lawson (1984) compared the ways in which designers (in this case architects) and scientists solved the same problem, in order to look for underlying rules which would enable them to generate the correct, or optimum, solution. In contrast, the designers tended to suggest a variety of possible solutions until they found one that was good or satisfactory. The evidence from the experiments suggested that scientists problem-solve by analysis, whereas designers problem-solve by synthesis; scientists use "problem-focused" strategies and designers use "solution-focused" strategies.

The "act" of designing is a problem-solving "performance" that is not necessarily the same as research and analysis. Prospective solutions can even be generated without any research (in the usual sense). It may be performed without the designer being involved in the research stage or stages. More often than not, research in materials technology and/or marketing already has been done, so the designer's task is to synthesize the numerous factors and to create a

6 Nigel Cross, *Engineering Design Methods* (England: John Wiley, 1989). Cross provides a good review of a range of design methodologies that have been proposed in recent years. This excerpt is from Brian Lawson's "Cognitive Strategies in Architectural Design," in N. Cross, ed. *Developments in Design Methodology*, (New York: John Wiley, 1984).



solution. It is this “special” creative step that designers take which has enabled our fast problem-solving abilities to develop as a saleable culture in a commercial world.

The designer often is operating on a different cognitive mechanism from the human rationale model that is expressed in the problem-solving approach of the scientific method. Alan Fletcher, a founding partner of Pentagram clearly operates on a solution-focused strategy, with some interesting insights:

For myself, I try to sum up the situation, back in edgeways, and cast around for ideas on which to hang further ideas. It's an intuitive process involving search, discovery, recognition, and evaluation. Rejection or development. There are no specific rules or recipes. One might slip through a sequence of actions in seconds, sweat through step by step, start backwards, move randomly from one point to another, or do what surfers call “hang ten”—get your toes in the board and ride the crest of the wave.⁷

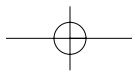
The designer often telescopes a mass of fragmented bits of information and then—usually after a period of incubation—invents a coherent and often elegant proposition that embodies all or most of the rag-bag of bits. Fletcher describes the “search, discovery, recognition and evaluation” in research terms, but calls it an intuitive process that can be accessed in any order. This somewhat chaotic cascade of thoughts is what also has been described as a right-brain way of processing information. The right and left hemispheres of the human brain have been acknowledged as holding different cognitive processing mechanisms where the left-brain accommodates deductive and sequential reasoning, and the right brain handles the nonverbal, visual/spatial holistic thinking.⁸

The question that might be asked is “But is holistic thinking research?” Although perhaps not within the conventional notions of research which makes “objectivity” a benchmark for validation, but, in reality, science generally recognizes the part that hunches, intuition, and flashes of insight play in the research process. Without an imaginative insight into what data “might” mean and the variety of ways in which it “could” be interpreted, science would have made little progress in extending the body of knowledge.

The primary difference between science and design centers around the problem-focused approach versus the solution-focused approach. It must be clear that both science and design bring right brain thinking into the research process, but science (generally speaking) keeps it under strict harness and drives mainly on the left side of the brain. Design, on the other hand, gives the right brain full gallop as often as possible, to mix a few metaphors! The process essentially is the same, only the emphasis is different. Press sums it up as “The initial leap of faith which is explicit in the artistic method would appear to be implicit to that of science.”

7 Jeremy Myerson, *Beware Wet Paint* (London: Phaidon, 1996).

8 My paragraph is a simplistic interpretation of a complex process, but the notion of right- and left-brain modes of thinking is a convenient shorthand for two contrasting styles of thinking that is generally accepted at a basic level. More detailed explanations may be found in such standard works as: Sally Springer and Georg Deutsch, *Left Brain, Right Brain* (San Francisco: Freeman, 1981).





The design process is a research process. Figure 1 shows a process that will be familiar to researchers in any field. The action of designing is the same as the moment of synthesis that occurs in all forms of research, when the various parts of the data and analysis begin to make sense. “Serendipity,” as many social science researchers call it, is an essential element of the journey through the research process. As Press points out, creative and artistic “researchers” revel in the intuitive stage (synthesis), whereas it is customary for scientists to play down the subjective interpretation of evidence. This can be seen in the extent to which the language in science is objective and in the third person. Discoveries are made to appear self-evident. In design, this moment of synthesis is the main focus—to be celebrated and widely communicated as “inspired.” This moment of synthesis may be expressed as visual spatial knowledge in action. The design process traditionally is seen to be an action process centered round the synthesis stage. However, for this process to be recognized as a research activity, it must be made visible and this is where action research methodology adds two essential ingredients.

Action Research and Designing

Action research arises from a problem, dilemma, or ambiguity in the situation in which practitioners find themselves. It is a practical research methodology that usually is described as requiring three conditions to be met. First, its subject matter normally is situated in a social practice that needs to be changed; second, it is a participatory activity where the researchers work in equitable collaboration; and third, the project proceeds through a spiral of cycles of planning, acting, observing, and reflecting in a systematic and documented study.⁹

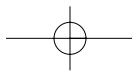
Ortrun Zuber-Skerritt¹⁰ has written extensively on action research. This is her summary of its origins and process:

The process of action research was first conceptualized by Lewin (1952) and further developed by Kolb (1984), Carr, and Kemmis (1986) and others. In brief it is a spiral of cycles of action and research consisting of four major moments: plan, act, observe, and reflect. The plan includes problem analysis and a strategic plan; action refers to the implementation of the strategic plan; observation includes an evaluation of the action by appropriate methods and techniques; and reflection means reflecting on the result of the evaluation and on the whole action and research process, which may lead to the identification of a new problem or problems and hence a new cycle of planning, acting, observing and reflecting.

The above cyclical approach is very familiar to designers because it bears a strong resemblance to the design process outlined earlier: problem/research–analysis–synthesis–evaluation (plan–act

9 D. Kember and M. Kelly, “Green Guide” 14. *Improving Teaching through Action Research* (Higher Education Research and Development Society of Australasia Inc., Campbelltown Australia, 1993).

10 Ortrun Zuber-Skerritt, *Action Research in Higher Education* (London: Kogan Page, 1992).





–observe–reflect). Design seldom takes place as a single flash of inspiration that resolves all the pieces in one go. It usually requires several cycles to review, amend, adapt, and refine before the initial concept is worked out, and the execution of a design solution can be made. For any designer who has carried out an action research project (however loosely), the similarity to a consciously “designed” approach to the task in hand is very striking.

This similarity is accentuated by the notion of *action* combining with “research” as an interplay of forces in the process of the activity, and this is precisely what designing is about. This interplay may have different emphasis at different times, sometimes the action is paramount and sometimes the research is more important. Bob Dick¹¹ expresses it as:

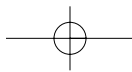
I regard action research as a methodology which is intended to have both action outcomes and research outcomes. I recognize, too that, in some action research the research component mostly takes the form of understanding on the part of those involved. The action is primary. In distinction, there are some forms of action research where research is the main emphasis and the action is almost a fringe benefit.

I suggest that action research and the action of designing are so close that it would require only a few words to be substituted for the theoretical frameworks of action research to make it applicable to design. Action research has been described as a program for change in a social situation, and this is an equally valid description of design (note the striking similarity to Press’s “a researched proposition for changing reality”). However, to apply the second and third conditions of action research to the design field (emancipatory participation and systematic reflection) presents more challenging concerns for current design practice. My argument is that design already is moving in this direction and could be fortified by adopting principles which in action research have had time to develop and mature.

The “totality” of the collaborative nature of action research is probably more than many designers would accept within the present professional paradigm. They may support the development of team skills for working on multidisciplinary design projects, but few will genuinely include the users, consumers, and the public into the circle of participants, although this is beginning to occur. Participation and collaboration in action research requires that all those participants share in the developmental process in an emancipatory role. Action research has been applied extensively in teaching practice. Robin McTaggart¹² of Deakin University has observed, “Unfortunately there is still a reasonable expectation that academics will be imperialistic in their relationship with workers...” and this

11 Bob Dick, “A Beginners Guide to Action Research” at [www: major-domo@psy.qu.oz.au](http://www.major-domo@psy.qu.oz.au). ‘Artlist’ file, 1995.

12 Robin McTaggart, “Principles for Participatory Action Research.” Paper presented to The Third World Encounter on Participatory Research, Nicaragua, 1989.





could very easily be translated to the traditionally imperialistic role of the designer or architect.

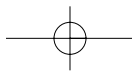
Authentic collaboration in research is more than just a multi-disciplinary design team approach. The users of design should be genuine “collaborators,” and not merely co-opted for token comments in an illusion of collaboration. Recent moves in the design field toward user-centered designing imply a more serious commitment to what is meant by collaborative working in design—or action research. Evaluation of their own work by designers must be more than *prima donna* personal preference. A more genuine form of collaboration should apply to designers, whether they are working in teams or as sole practitioners.

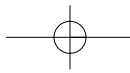
It could be argued that collaborative participation in the design process is more difficult to attain because designers often are operating as sole practitioners for individual clients. I had the opportunity to discuss the “collaborative” condition of action research with Stephen Kemmis, one of the main protagonists of action research in Australia.¹³ He was quick to point out that no one actually works in isolation (“no one is an island.”) and that we are all subject to the social mindsets that are the frameworks for our personal constructs of knowledge and how we act on that knowledge. It seems clear that individual acts of creativity are incremental hops along a set of socially embedded interactivities that are an inescapable condition in which the creative concept occurs. This kind of “social collaboration” is a universal condition from which we cannot escape. In any event, it does not prevent designers from collaborating with the end-users.

Action research requires the research process to be made visible. It demands public accountability and visible self-evaluation, an issue that is assuming increasing importance for current professional design practice. Surely the days are gone when only the designer and client approve a design. The public is having an increasing say in validating the design, environmental concerns being an obvious example of the way that public dialogue is impinging on design. There should be no qualms about design benefiting from the need for practitioners to make their processes visible and socially responsible. That's what documented research does, it legitimizes the proposition. If a design is going to “change reality,” as Press suggests, it inevitably requires considerable investment in time and money, and the public should have the means to understanding the developmental process. It is through increased understanding of creativity—demystifying the process—that the community is likely to develop more respect for designers and their role in society.

Systematically documenting this process is more than a chore for design consultant, who generally are not trained in these skills, and it might appear to demystify the special skill that is being marketed. Abandoning the sacred cow of “creative mystique”

13 During a private conversation, I explored a number of avenues relating design practice and action research with this well-known Australian author. For a standard action research text see: W. Carr and S. Kemmis, *Becoming Critical: Education, Knowledge and Action Research* (Lewes: Falmer, 1986).





would be a hard act for the design agencies to perform, since most have neither the will nor the research skills to change the working practice.

But “systematic and documented study” is a failing which design practice has perpetuated for many years. The profession, on the one hand, bemoans the public’s lack of understanding and appreciation of the benefits of design to the community, both economically and culturally. At the same time, it has done little to articulate those benefits for the education of the general community. Too often, designers scorn writing about their practice in anything other than journalistic and celebratory terms. Writing and documenting design success stories is left to the magazines, who take a fairly superficial, glossy view of design practice. Case studies that have been a staple diet in the business world are almost nonexistent in design (a notable exception being the Boston Design Management Institute series¹⁴).

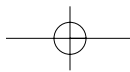
Action research has an established methodology for documentation that can serve as a useful model for design. Zuber-Skerritt, in 1992, acknowledged earlier authors of the action research operation, and offered her own version with the CRASP model:

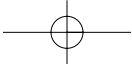
**Critical (and self critical) collaborative inquiry by
Reflective practitioners being
Accountable and making the results of their inquiry made
public
Self-evaluating their practice and engaged in
Participative problem solving and continuing professional
development.**

CRASP provides a ready-made formula that is very easily adapted to the design situation. Many design consultants already work as teams and hold regular meetings at which progress is reported to members and discussed in an open and collaborative atmosphere. Action research methodology works on the same principle, but adds a more rigorous dimension to the operational ground rules, and assists in the formal documentation of the proceedings. The cyclical nature of the methodology involves group discussion, trialing of ideas, reflection, evaluation, and action in an iterative, evolutionary design process—a mode of working which design teams find familiar and comfortable. Action research is an appropriate methodology for any design project where the final outcome is undefined. The implicit process becomes explicit, and members of the design team learn consciously from each project and thus become empowered through the process.

To make this design/reflection process visible, the process has to be structured and should adhere to something along the following lines (adapted from Zuber-Skerritt):

14 The Design Management Institute (DMI) in Boston is one of the few organizations that has taken design management as its central feature of activity. The DMI publishes a regular newsletter and a series of design case studies that adhere to a management model. More information may be obtained from their Website: www.designmgt.org.





- Data gathering by the participants
- Participation and power-sharing in decision-making
- Collaboration as a critical community
- Self-reflection, self-evaluation, and self-management
- Learning progressively by doing and making (mistakes) in a “self-reflective cycle”
- Reflection and communication to the broader community.

The iterative process of plan–act–observe–reflect entails reflection in-action as a description of how members deal with the act of doing things “on-the-fly,” followed by the reflection on-action as a more considered hindsight view. This process parallels the conventional design approach, but is enhanced by the transparent structuring. Significantly, action research also is practical–participative–emancipatory–interpretive, and this involves the team reflecting on the process as a collaborative and emancipatory exercise—including the users in addition to the client. There should be no “outsiders” in this collaborative process.

Records should be made and each project fully documented, monitored, and evaluated. These records become the case studies of a design consultant's practice. They are likely to be confidential during the period of development and, in many cases, may only be used in-house and for client information. Collaboration with users also may need special negotiation to ensure confidentiality, but this is not new to academics in institutions where university ethics committees now keep an anxious eye on research activities and have protocols for carrying out a wide variety of projects. At some point in time (if not immediately), the confidential nature of the material will be a less important issue. Case studies can be communicated to colleagues and the wider community through publication in design journals and the popular press in order to promote “best-practice” design projects to the benefit of the profession and the education of a more literate design public.

Currently, design case studies usually are short articles couched in journalistic terms and presented as contemporary exemplars in the professional magazines. Relying largely on high quality photographs of the products, the principle aim is to publicize successful and innovatory products. There is seldom serious critique from the writer, and in many cases, the text is supplied by the designer or his or her's publicity agent. A mature profession needs to be more self-critical and more systematic in providing evidence of the process of creation from beginning to end, with methodologies in place for objective evaluation. The moment of synthesis may be highly personal and subjective, but the case study is an opportunity to reflect and record the process and product for future refinement.

Design academics in the universities are beginning to understand and employ a wide range of research methodologies that are



suitable for design research. However, most academics perceive a difference between the exercise of professional expertise (that is recorded in a case study) and research per se as the development of new knowledge. Basically, the opponents of action research say that a record of professional practice is not contributing new knowledge, which is the primary purpose of research. This is a fine-line argument. Clive Dilnot has argued that design practice as a consultative process might not be regarded as knowledge-building research, but when reflection is coupled with analytical thinking for further enactment, it can contribute new knowledge that resides within the realm of research.¹⁵ Geoffrey Caban adds:

What is needed for effective translation is a higher order of design-knowing which helps to convert the situation-limited action research into strategic or applied knowledge.¹⁶

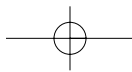
Although the application of professional knowledge in the “situation-limited” activity of consultant work as described by Caban may not result in new knowledge, it frequently conforms to current practice. There are two points that should be taken into account in this argument. First, the recording of design practice as systematic case studies has been comparatively rare in the design field, and a substantial number of new case studies will add to the body of knowledge in design. A few examples may not provide the critical mass of studies that may begin to indicate trends or new insights gained from interpreting a larger body of data in this form. Second, professional practice can, and sometimes does, create new solutions of a higher order of design knowledge that succeeds in enlarging the body of design knowledge. An innovative design solution may adapt visual forms in novel ways that previously have not been recognized. John Langrish lists six categories¹⁷ of case studies, one of which he describes as “cor, look at that!” This is a case study that has transcended the normal “situation-limited” activity and moves into the extraordinary situation, providing new insight. Designers not infrequently invent new answers to conventional situations that transcend the ordinary, with the result of creating a higher order of thinking about that situation.

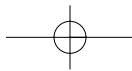
This aligns with situational action research. Bob Dick has pointed out that there are some forms of action research where research is the main emphasis and the action is almost a fringe benefit (and vice-versa.). The same applies to design practice. Action research provides a tried and tested model for immediate translation to design practice and, if adopted as a regular mode of operation, could provide a learning resource in the way that case studies have contributed to the establishment of a culture of dissemination and learning in the business world. And some case studies will qualify as research reports that create new understanding and knowledge in the field of design.

15 Clive Dilnot, "The Science of Uncertainty: The Potential Contribution of Design to Knowledge" *Proceedings of the Doctoral Education in Design Conference*, Ohio State University, 1998.

16 Geoffrey Caban, "The Implications of the 'New Scholarship' for Practice-based Research in Design" in *Proceedings of the Third European Academy of Design Conference* Design Cultures (Sheffield: Sheffield Hallam University, 1999).

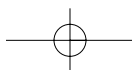
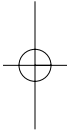
17 John Langrish, "Case Studies as a Biological Research Process," *Design Studies* 14:4 (1993).





Sharing experiences in the form of substantive discourse of this nature will help design to progress as a discipline field. Investment in research and development in design is a recognized need but, unfortunately, one of the major obstacles to this development is a fear that sharing will “give away” some perceived competitive advantage. Worse, there is a prevailing culture in the profession that is quite likely to deride research. Overcoming this obstacle may take another generation or two of practitioners—to those who have experienced postgraduate study and have developed research capabilities alongside their creative professional skills.

Greater collaboration between the profession and the world of academia could establish better understanding of working practices in both research and professional practice. It might just instigate a program of change that would ultimately benefit the profession, helping to ensure its survival in a world that inevitably will demand more evidence of the quality of services it provides. Action research methodology provides a ready-made scaffold for a systematic research method that could be easily understood and adopted by designers in the translation of their professional practices into acceptable academic and public discourse.





These heart images were collected over a number of years from different sources. I am unable to identify all the authors, however, I can acknowledge the following: Bruce Blackburn, Jerzy Czerniawski, Milton Glaser, David H. Hwang, Al Klenk, Edward Lutczyn and Wolfgang Schmidt.

Speaking of the Heart: Some Annotations

Hanno Ehses

Cute, symmetrical, red heart-shapes signify love and affection, kindness, care and joy. They are conventional, but unmistakable, a part of no official system of symbols but almost universally understood nonetheless. In many cultures of many periods the heart has been treated with reverence and the idea that it is the essence or soul of the human being is widespread. The countless graphic representations of the heart appear to be inexhaustible, persistently appealing to our collective sense of myth and form. Its trans-cultural acceptance enables designers and other visual artists to breathe new life into the dried husk knowing that the heart symbolism is within common experience.

I ♥ NY

"I love New York" was arguably one of the most ingenious promotional campaigns in recent decades. Modern people are commonly disheartened by the inhuman monotony, facelessness, brutal violence and fast pace of large cities; but here we see a heart, know the acronym, and decipher the logo; we feel warm-hearted and accepting as a consequence. In contemporary "media-scape" the heart symbol can be found on Valentine's and birthday cards; on posters, logos, ads, bumper stickers and wrapping papers; and we impose its shape on anything from candies, cakes, balloons, jewelry to buttons, garments, gift boxes, and even household and furniture items.

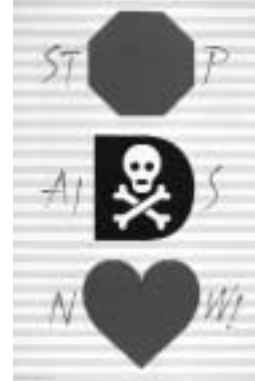
For most of us, the real human heart is a terrifying, bloody, pumping muscle that throbs and shudders inside us until the moment when the organ is genetically programmed to break down. It is falsely thought of as the middle of us. It is set askew – nothing symmetrical about it – in our chests, attached to veins and passages that we all must struggle to keep open. In the past, people have thought of hearts as somewhat independent, almost as little beings that are imprisoned within the body, pounding when we are upset. The ancient Greeks speak of the hearts "leaping," "kicking," "swelling," and "jumping out of the chest." By contrast ours today "rise" with hope and "sink" with disappointment. Only when it means well is a "heart in the right place."

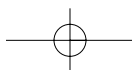
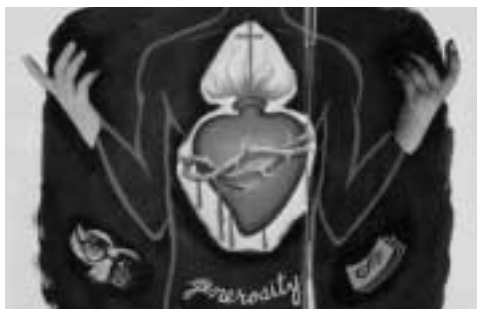
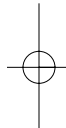
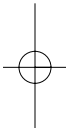
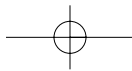


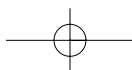
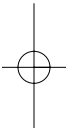
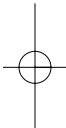
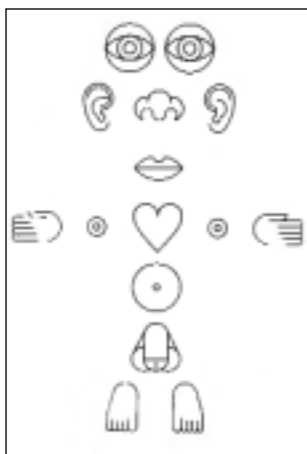
The heart remains the innermost core of the personality, the seat of whatever is sincerely felt, meant, and desired. Our hearts have become the seats of compassion, but the main desire, the noblest movement of the heart, we now feel to be love. The verbal language of hearts underscores the physicality of the emotions: we speak of hearts "burning with love," as being "pierced," "wounded," "bleeding," "broken" or "stolen," and people may be "closed" or "open" hearted. Countless painters and other visual artists since the Middle Ages have made metaphors such as this literal.

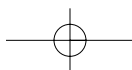
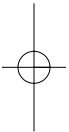
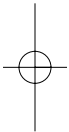
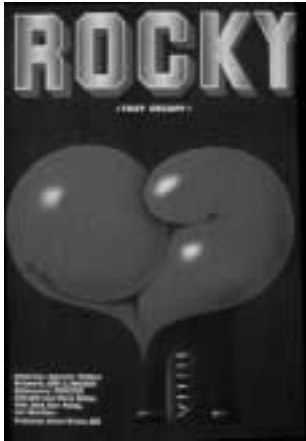
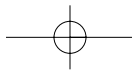
Visual language, like verbal language, can be a medium of prose or poetry. It is possible to create an image by stringing elements together in a rather loose way as an assembly of marks and symbols. It is not dense and it is not profound. The poster "Stop Aids Now" can exemplify the point. By contrast, we can also arrange symbols in such a way, that they overlap: the image statement is very dense, it captures a plurality of meanings in a small space, and through this density it becomes profound. In a poem, this kind of density creates illumination by making identities between symbols and meanings whose identity we have not understood before. The "Amnesty International" poster qualifies as an example of a visual poem. The connection between the organizations name, the fence with the heart shape and the wide-open landscape behind not only illuminates the symbols but also illuminates our lives and perhaps the way we view political prisoners and existing systems of justice, including our own.

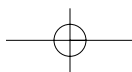
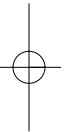
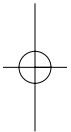
As active players in the politics of daily life that speak from within culture and do not position themselves outside and above it, designers continue to use the heart symbol as a multivalent metaphor, plugging in, as we do as readers, to a very venerable iconographical tradition. The common 'life cycle' shared by all symbols are traceable to three phases, namely invention, maintenance and decline. By making the heart symbol an integral part of a signifying statement, for example by fusing it with other symbols, graphic designers not only serve a clients immediate need to convey a message to a targeted audience. Indirectly, and at the same time, they also evoke the shared bond that exists between people and their cultural symbols, thus renewing, maintaining and frequently expanding their feelings of identification in a common social life.











World Wide Web Interfaces and Design for the Emergence of Knowledge

Carl Francis DiSalvo

Introduction

We have entered into a new era in which our lives increasingly are being mediated by the computer. This mediation exists from advanced computational scenarios, such as intelligent software agents and immerses virtual reality environments, to more simple scenes, such as browsing for books or purchasing insurance online. Within these moments of computational mediation, our interaction, and subsequently our experience, is powered by the processor and viewed through the screen. Disturbingly, these computationally mediated experiences all too often are completely unsatisfying. Interactivity often is reduced to clicking a button on the screen. Perhaps the greatest amount of control we are given over the content and experience of our computational environment is the ability to turn the computer off.

There already is a history and an established bibliography addressing the use of computational media for learning. The literature on interface and interaction design is overwhelming. However, investigations of the interface design of museums as sites of applied innovation have been limited to dialog within and among cultural institutions. Museums are an intriguing place to seek out innovations in design and technology. As institutions, they tend to attract sophisticated designers, have a wealth of content, limited technological resources, and a drive to create compelling educational experiences. They do not represent the mainstream, but can be looked at as places where investigation that trickles into the mainstream occurs. This effect is apparent in the interface projects that they have undertaken.

Over the past twenty years, museums have actively engaged information technologies. For the most part, this effort has centered on the field of museum informatics, specifically the creation of libraries and the documentation of collections. With the advent of the World Wide Web and its capability for the relatively easy and low cost mass distribution of information, museums began to explore the use of the www as a site for exhibitions and related projects. Many of these exhibitions and projects did, and continue to, present the information in an online gallery format. In this



format, the works are displayed as static images on a wall, except the wall was replaced by the screen and, rather than walking through the gallery, users clicked their way from image to image.

Some museums have begun to investigate the www as a locale, as well as a medium for the experience of art and related cultural activities such as education. In these scenarios, the museums used the nature of the network environment coupled with opportunities for sophisticated interactivity to create compelling experiences for the audience. In these scenarios, the designers of these interfaces for online exhibitions and projects have used the wealth of information present in an exhibition. Historical facts, images, and multimedia have been coupled with interactivity to create interfaces that allow us to experience information in a meaningful way. In order to understand and appreciate the design of these, we must begin with an understanding of the www as a medium of information distribution, as well as the difference between information and knowledge.

Information, Knowing, and Knowledge

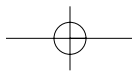
The www is not just a funky tourist stop along the “information superhighway.” It is a new lane along that highway, requiring a new way of driving. In this paper, we are not interested in joy riding, we are interested in traveling. We have a destination, a goal which gives us a purpose. That purpose is different from the acquisition of information, as might seem to be implicit in the phrase “information superhighway” that has been attached to the www. In fact, the assignation of this term to the www is misdirected. Herbert Simon in *The Science of the Artificial* insightfully points out that our construction of the www into an “information superhighway” is conceptually flawed. It is flawed in that it rests upon the notion of a desperate need for vast and rapid information flow. However, such a need does not exist. A need does exist for a vast and rapid system that allows for meaningful interpretation of information.¹ In short, what is needed is a system that supports the cultivation of knowledge.

Information is not knowledge. This is something that, after our much-heralded launch into the “Information Age,” we are beginning to acutely realize. Information is a record and presentation of data. Information can be organized in a germane form to be sure. It can express intricacies to such an extent that information management and study, quite with reason, constitute a science. But it is not knowledge.

John Slatin, in his chapter “Is There a Class in This Text” in *Sociomedia*, discusses the use of hypermedia for educational purposes, examining the relationship between information and knowledge. He proposes that, in the use of that “If information is the news of difference,² then knowledge has to do with recognizing the implications of the new, with creating patterns that connect the differ-

1 Herbert Simon, *The Sciences of The Artificial* (Cambridge: MIT Press, 1996), 144.

2 Gregory Bateson, *Mind and Nature: A Necessary Unity* (New York: Bantam, 1980).





ences but do not resolve or dissolve them.”³ While the potential for knowledge to emerge is dependent upon the information, to create knowledge it is necessary to design opportunities that act upon differences within that information, constructing a context in which that difference is of meaning.

Stating that there is a difference between information and knowledge is not enough; we must be able to say something about what knowledge is. The positioning and nature of knowledge I will present is founded upon American social pragmatism, particularly the writings of John Dewey. According to this paradigm, knowledge is the result of an act, an action, it requires efforts and activity. Knowing is not passive, and thus the possession of knowledge cannot come about in the absence of interaction. Dewey writes, “There is no such thing as genuine knowledge and fruitful understanding, except as the offspring of doing.”⁴ This interaction, in the context of the WWW interfaces, is based on information and experiences with information. These experiences are ones of doing, that is, of acting upon that information and its representation in the interface. “Only by wrestling with the conditions of the problem at first hand, seeking and finding his own way out, does he think,” that is, possess knowledge, or know. Thus, experience creates the opportunity for knowledge: the meaningfully designed, sensing of information. The nature or source of this information is not essential for the construction of a meaningful experience; it may be read from a database or gleaned from years spent in the wilds of Alaska. It is the meaningful interaction with and action upon this information, the doing, that transubstantiates it in to what we will call knowledge.

Dewey suggests that knowledge is not one specific moment or activity, but rather a scenario of engagements. “For Dewey, a moment of engagement is an ‘experience,’ but experiences do not exist as discreet entities...Experiences have a ‘pervasive’ quality. They are immediate and also aesthetic.”⁵ Knowledge thus is an emergent process, and not a static happenstance. Knowledge is actualized by the organization and interaction of individual instances and information into a product, the meaning of which extends beyond its individual parts. While the emergence of knowledge is a phenomenon, which may not be completely deconstructed, it may be cultivated through the design of engagements, and of experiences. It is this conception of knowledge founded in Dewey; knowledge as the emergent result of an activity of awareness committed upon some bit of information, that we will use in order to analyze and achieve advanced visual interfaces.

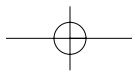
Revealing Things

The interface is something that has to be experienced in order to fully understand it and to enact its potentialities. Since this discourse is taking place on a piece of paper, a description will have to do. Describing and examining the design and experience of two

3 John M. Slatin, “Is There a Classroom in This Text? Creating Knowledge in the Electronic Classroom” in E. Barrett, ed., *Sociomedia: Multimedia, Hypermedia, and the Social Construction of Knowledge* (Cambridge: MIT Press, 1992), 34.

4 John Dewey, *Democracy and Education: An Introduction to the Philosophy of Education* (New York: Simon & Schuster, 1997), 275.

5 Richard Coyne, *Designing Information Technology in the Postmodern Age* (Cambridge: MIT Press, 1995), 41.





interfaces constructed for museums (one as an exhibition and the other as a cultural project) on the www will provide us with material to further investigate the transformation of information into knowledge through the interface.

Plumb Design, a New York interactive design studio, created a captivating interface for the Smithsonian, supported by a proprietary tool entitled Thinkmap™. Thinkmap is a Java applet, which serves as an engine to enable the visual enactment of an advanced interaction paradigm.

Although Thinkmap generates graphical representations of data, it does not produce static graphs, but rather Java Maplets™, which are kinetic displays of multidimensional information that link directly to complex data sets. Thinkmap gives users the ability to understand interdependent information through interacting with data in real time.⁶

While the Thinkmap tool has been used in many applications to date, two stand out as germane examples. One of these examples is *The Visual Thesaurus*⁷ a “way of exploring language through creating a visual interface to a thesaurus”⁸ in which a user can manipulate textual information objects (words) in either two- or three-dimensional space to explore their interrelationships of meaning. The other example is the online exhibition *Revealing Things* for the Smithsonian Institution.⁹ In this example, the interface for the exhibition is not merely a tool for the presentation and navigation of the exhibition. Instead, the interface itself is the very space of the exhibition. The challenge in creating this interface-based exhibition, as stated by Plumb Design on their Website, was:

Develop an online exhibition devoted to material culture that combines objects from the Smithsonian collection with everyday objects contributed by visitors. The Smithsonian Institution approached Razorfish and Plumb Design to develop a prototype for an exhibition that demonstrates the meaning behind everyday objects. The challenge was to show a group of objects connected in a myriad of ways, and encourage people to explore.¹⁰

When a user comes to the *Revealing Things* exhibition, she is presented with a Maplet, a dimensional representation of the exhibition contents within a colorful framework of images and informative text headers. The Maplet used in *Revealing Things* functions in the same manner as the one used in *The Visual Thesaurus*. By interacting with the Maplet, the user activates the process of culling forth through space information about the selected topic. A user selecting a topic on the Maplet tree with a “mouse” and moving the object, which is text, in different directions accomplishes this interaction. As this occurs, in addition to the presentation of information of the

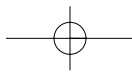
6 Plumb Design Website, <http://www.plumbdesign.com/projects/thinkmap.html> (accessed January 2001).

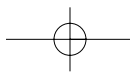
7 Plumb Design Website, <http://www.plumbdesign.com/thesaurus> (accessed January 2001).

8 Plumb Design Website, <http://www.plumbdesign.com/thesaurus> (accessed January 2001).

9 Smithsonian Revealing Things Website, <http://www.si.edu/revealingthings/> (accessed January 2001).

10 Plumb Design Website, http://www.plumbdesign.com/projects/smithsonian_institution.html (accessed January 2001).





selected topic, relational information in the form of texts and images is brought forth, and the relationship between the different kinds of information is represented visually through dimensional relationships on the Maplet tree. Thus, as the user interacts with the interface of *Revealing Things*, the representations of information changes and is experienced, and as the title expresses, connections between the chosen objects are revealed.

“I-Life”

Another example of an innovative interface on the www is a component of Guggenheim CyberAtlas Project entitled “I-Life”¹¹ designed by Laura Trippi.

CyberAtlas, a project of the Guggenheim Website and Guggenheim magazine, is a concerted effort to chart this terra incognita [cyberspace]. The aim of CyberAtlas is to commission and collect a series of maps of cyberspace, with a particular focus on sites related to visual art and culture. Unlike the typical navigational chart, the maps in CyberAtlas can take you where you want to go, as well as tell you how to get there: clicking on a Website in any of the maps will transport you immediately to the corresponding Web page.¹²

The Guggenheim CyberAtlas is a collection of commissioned interfaces that act as maps to cyberspace. “I-Life” is one of these interfaces/mapping projects designed by Laura Trippi. The maps of “I-Life” are integrated and designed into a visual interface that permits exploring intricacies of relationships between intersecting data (specifically Websites) in the realm of the arts, humanities, and technology on the Internet. The visual design of this interface does not appear to be a map, or at least one that we are accustomed to. Rather, it is a highly stylized and color-coded organization of material based theoretically and visually on neural nets.¹³ The basis of the organization of information on neural nets is a challenge to conventional information architecture, and the visual interface reflects this.

As in neural-net diagrams, along the top are the “input nodes”—here disciplines in the hard and social sciences generating models of life and thought.

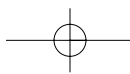
Along the bottom are the “output nodes”—in this case art, theory, and popular culture, categories of cultural production that (among other things) filter, redirect, and disseminate material from the sciences. The middle nodes do the grittiest work, and it is here that the Websites themselves appear, arranged in the four main thematic groupings mentioned above.¹⁴

11 Guggenheim CyberAtlas, I-Life Website, <http://www.guggenheim.org/cyberatlas/home/index.html> (accessed January 2001).

12 Guggenheim CyberAtlas Website, <http://www.guggenheim.org/cyberatlas/home/index.html> (accessed January 2001).

13 A neural net is an aggregation of interconnected nerve cells. It is a mathematical construct that has been used extensively in the development of artificial intelligence. Neural nets often are represented by complex diagrams that represent the neurons as nodes within a network.

14 Guggenheim CyberAtlas, I-Life Website, <http://www.guggenheim.org/cyberatlas/home/index.html> (accessed January 2001).



A user interacts within the “I-Life” interface by selecting graphical objects—“nodes,” on the interface map with their mouse. This selection then reveals a detailed level of the selected node, presenting its content and the interrelations among the items within that “node.” These intermediate “nodes” are represented by the same formal visual interface elements as the higher level view of the map. At these intermediate map views, the items represented as individual “nodes” are hyperlinks, taking a user to a specific site other than “I-Life.” When a user chooses to examine a “node” that links to a site outside of “I-Life,” that chosen site appears in the frame that the “I-Life” map previously occupied. A floating window exists next to the main browser window. In this window is a smaller representation of the interface/map, which continues to provide a relational context and opportunities for interaction between the site now being viewed and the “I-Life” project. Through the elegant complexity of this interface, the “I-Life” project implements an advanced visual interface, based upon a novel interface paradigm and its visual interface and interaction is expressed accordingly.

Designing the Emergence of Knowledge by Association:

The emergence of knowledge through interaction with the *Revealing Things* and “I-Life” interfaces is not happenstance. This experience is a designed function of the product, expressed through the interface: a purposeful outcome of the visual representation and interaction models. It must be designed in a manner in which the actions that a user takes from one point to another mean something.

Revealing Things and “I-Life” both use conceptual strategies within their design to allow for the emergence of knowledge through the interface. These strategies take two primary forms. The first is through visual representation. The visual representation is the immediate impression that a user gets from an interface: it is the impression which users are most familiar with. The second is the interaction model. The interaction model is the formal structuring of the experience with the interface through direct manipulation. These two conceptual strategies are inextricably tied together in interface to create its whole.

The primary strategy for visual representation enacted by both the *Revealing Things* and “I-Life” interfaces is that of the spatial representation of information. In the case of the *Revealing Things* interface, the spatial representation is based upon the three-dimensional representation of information. When the user encounters the *Revealing Things* interface, the first impression received is the presentation of three dimensional information consisting of text objects on a tree-like structure. The organization, and thus visual representation, of the information upon this three-dimensional tree is one of association. Within *Revealing Things*, the information is presented to make the visual locality of information meaningful. For the user to interact with that information, he or she must make cognitive sense

of its three-dimensional visual representation. In the process of navigating the three-dimensional representation of information, the user is continually presented with visual reinforcements of the meaning of this dimensionality. As one text object is chosen and brought forth, the text objects are affected. The associated text objects visually present themselves in perspective, either growing larger or smaller in relation to the chosen text object. This three-dimensional representation of information does not exist alone, but is reinforced by a standard, flat, presentation of corollary information alongside it.

In the “I-Life” interface, the spatial representation is based upon the mapping of information in a two-dimensional structure of neural net diagrams. The first impression received of “I-Life” is the representation of information upon a colorful diagram organized into nodes and connections between those nodes. The core topics of information are visually represented along the top and bottom of the interface as primary. These primary nodes are then visually linked with other nodes; some are primary nodes of their own, while others are relational nodes of information existing in-between the groupings of the primary nodes. In the process of navigating “I-Life,” the user travels along the lines of linkage and activates responses in the form of culling from the nodes more detailed representations of the information. Each click brings another level of visual detail, not unlike zooming in on a map for increased levels of detail. Within this representation, the information is granted space by its placement upon a map, a neural net diagram which communicates the association and interrelationship of ideas via a conceptual space model. The space model is conceptual because it does not refer to actual space, but rather references the notion of the cognitive association of like ideas by proximity of thought or purpose. The association by proximity is reinforced with the presence of linkages—lines drawn from node to node visually expressing the relationship between any two or more items within the interface.

The design challenge of the visual representation for both *Revealing Things* and “I-Life” is not the two- or even three-dimensional representation of information. The design challenge is the construction of such a visual representation of information whose spatial construct is meaningful. In designing the three-dimensional space for *Revealing Things* and the cognitive representation of space for “I-Life,” the space was not just required to exist, but was required to visually produce relations between information in a cogent and intuitive manner that informed the content itself.

The visual representation strategies developed for *Revealing Things* and “I-Life” work together with their interaction models to create the totality of the interface. However, it is the interaction model itself that drives the activity that takes place within these interfaces. With *Revealing Things*, the interaction paradigm is based upon the navigation of a three-dimensional information space. In

navigating a three-dimensional space, the information is not presented all at once, but rather culled forth from space through interactions which leverage the relationship of items based upon their position on an x, y, and z axes. Within this model, to reveal a certain object, another object must first be revealed and, in doing, additional associative objects are brought into view. This occurs in *Revealing Things* when a user selects a text object upon the three-dimensional tree. Once the object is selected, the user pulls it forward or pushes it to the back or chooses another object and brings it into view; thus the movement of one chosen object moves the entire tree in a kinematic relation. This kinematic relationship, driven by the user interaction, defines the relational nature of the interaction with the visual representation.

Though the technology that powers “I-Life” does not have the sophistication of *Revealing Things*, its interaction model is so strong as to make the issue of technological prowess irrelevant. While *Revealing Things* utilizes a three-dimensional spatial construct, “I-Life” utilizes a spatial construct based upon the concept of cognitive space for its interaction paradigm. This idea of cognitive space is based upon neural nets. The adoption of the neural network model by Trippi in “I-Life” engages the user in a manner of interaction that is fundamentally an interior phenomena referring to the associative linking of information within a brain in order to create a sense of knowing. In order for a user to interact with the “I-Life,” he or she must activate the interrelated nodes of information. Additionally, the user must follow and reveal linkages between the nodes of information in order for the scope of their interconnectedness to become apparent and meaningful. This is accomplished by the activation of nodes upon lines of linkages, and the feedback of subsequent associated nodes and linkages being brought into view. In order to discover bits of information, the user must travel through the nodes of information in increasing depth. The extent of the information available, and even more important its context and meaning, is only made present by an active involvement with the spatial construct of “I-Life.”

The “Doing” Being Done in These Interfaces

The design strategy of associative visual representation and associative interaction within *Revealing Things* and “I-Life” is what makes possible an experience of meaning. These experiences of meaning, which the user enacts within these interfaces, are the “doing” which Dewey requires for knowledge to emerge. In both of the interfaces, the “doing” is designed and subsequently enacted through meaningful movement through space, which triggers an expression and subsequent understanding of the visual representations of information.

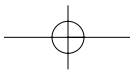
Within both *Revealing Things* and “I-Life,” the knowledge experience is a complex but elegant series of interactions with and interrelations among the information. We cannot define any one point in the experience with the interface in which knowledge emerges. There is no one moment of “Ah ha!” but rather a continuous and evolving experience with the interface. With *Revealing Things*, the physical manipulation of “doing” occurs as a user selects an object in a three-dimensional space. The conceptual “doing” that leads to knowledge occurs as the user reconciles the difference of information views with one another into a whole of meaning. Within the “I-Life,” the physical manipulation “doing” is a bit less obvious by the fact that it does not employ a spatial three-dimension construct which provides corresponding feedback, but it still is as involved and effective. “I-Life” uses the strategy of physically activating representational spaces of information by user choice along a map of cognitive space. The conceptual “doing” leads to understanding as the user places importance and meaning along the path of activity and interconnections with the information within the interface. Through these two examples, we are given a glimpse of the possibilities for the design of enhanced opportunities of computational mediation in our lives.

The Promise of Interfaces Designed for Knowledge

As with all discourse, we have come to a point where we must assign some sort of relevance to our discussion. We examined the visual interface through the two examples of *Revealing Things* and the “I-Life.” We illustrated how these interfaces are designed to engage the user with an experience through which knowledge can emerge. But we have yet to state why these advanced visual interfaces, which allow for the emergence of knowledge, are important.

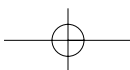
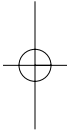
With our headlong leap into the information age, we have entered into a crisis of meaning in which increasingly questions our purpose and grasps for meaning in superficiality. The obscene proliferation of information in our daily lives may, in fact, be the very cause of our crisis in meaning. We have placed the mere creation and dissemination of information as the cultural imperative of the late twentieth century and we have ignored the consequences of that tide of information. We also have ignored the opportunities that meaningful interaction with information may provide. We have ignored knowledge. Compounding the situation is the fact that the sea of information in which we now find ourselves pathetically dog paddling in has transformed its essential nature as well. The essential nature of many of the experiences which form our knowledge have rapidly been transformed away from what we have known as the natural into the artificial. We seek experiences not directly with nature, but artificially with information. Margolin, again, has stated “We first need to question what meaning is in a world where reality is no longer the ground on which values are formed. Meaning then

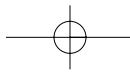
15 Victor Margolin, “The Politics of the Artificial,” *Leonardo Electronic Almanac* (MIT Press, 1995).
<http://mitpress.mit.edu/e-journals/LEA/home.html> (subscription required) (accessed January 2001).



becomes a strategic concept that exists pragmatically at the interface of design and use.”¹⁵ This statement places the value of meaning within the realm of design as an imperative. While we have realized that the seas have changes, we have only begun attempting to develop new ways of, quite literally, navigating them.

Design can approach interfaces as spaces to transform information into knowledge. These interfaces can provide meaningful experiences with information, and save us from its potentially numbing crush upon our lives. To do so, we must begin to approach interfaces not as tools, but rather as a medium in and of themselves. A medium differentiates itself from a tool in that the product of a medium reveals the essence of medium in its execution. The interface designed for the emergence of knowledge must be reflective of both its content as of itself. As a place of interaction, the interface becomes a place where the potential for the creation of knowledge exists. As a place of knowledge, this is where we find meaning and create experiences which are memorable.





Defoe and the “Projecting Age”

Tomás Maldonado

Introduction to the Italian edition of
Essay Upon Projects: Daniel Defoe,
Sul progetto, Milan: Electa, 1983)

Footnotes begin on page 84.

Introduction

Necessity, which is allow'd to be the Mother of Invention, has so violently agitated the Wits of men at this time, that it seems not at all improper, by way of distinction, to call it, *The Projecting Age*. For tho' in times of War and Publick Confusions, the like Humour of Invention has seem'd to stir: yet, without being partial to the present, it is, I think, no Injury to say, the past Ages have never come up to the degree of Projecting and Inventing, as it refers to Matters of Negoce, and Methods of Civil Polity, which we see this Age arriv'd to.

...

THE History of Projects

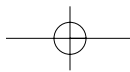
WHEN I speak of Writing a *History of Projects*, I do not mean either of the Introduction of, or Continuing of necessary Inventions, or the Improvement of Arts and Sciences before known; but a short Account of Projects, and Projecting, as the Word is allow'd in the general Acceptation at this present time, and I need not go far back for the Original of the Practice.

...

Wherefore 'tis necessary to distinguish among the Projects of the present times, between the Honest and the Dishonest.

...

In 1697, Daniel Defoe published his *Essay Upon Projects*.¹ In this singular work, in many senses uncannily pertinent to our time, Defoe announces the advent of the “Projecting Age.” The essay came two decades before the publication of another work by Defoe: *The Life and Strange Surprising Adventures of Robinson Crusoe of York, Mariner* (1719),² the adventure novel that brought universal fame to its author. In these works—explicitly in the first, implicitly in the second—the theme is that of man’s capacity to project. But the idea of project-oriented behavior expressed in the essay is diametrically opposed to the one illustrated in the novel.





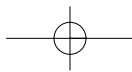
While, in the essay, Defoe advances the hypothesis of a project seen above all as an application of the “methods of civil policy”³—in the words of the author—to resolve the problems of a society profoundly shaken by “wars and public confusions,”⁴ in the novel, man’s ability to project is oriented exclusively toward the resolution of the problems of an individual whom fate (or, in the real episode that inspired Defoe, the discretionary power of the first mate of the ship) has tossed up on an uncharted shore, forced to live alone, without other men, “without society,” in a hostile environment.⁵

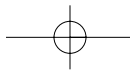
This is why Robinson never asks himself what would be “very useful to society,” but always and only what would be “very useful to me.”⁶ This explains, and partially justifies, the results Robinson achieves: he doesn’t design or project for others, but only for himself. His project activity never (or almost never) pays tribute to the value systems and norms that usually stipulate the mode of the project and the characteristics of the object being designed. He has only one problem: to survive. Anything that lies outside the realm of this will to survive is not perceived as a problem. And given the fact that Robinson is, above all, a “problem solver,” whatever he does not perceive as a problem just doesn’t, in practice, exist.

In this same context, we find another guiding principle in Robinson’s behavior: only what is convenient is pertinent. His obsession, in the final analysis, always is utility. This is why he often has been considered an emblematic figure for militant utilitarianism, or even the forerunner, in certain ways, of the ethical utilitarianism of Bentham, and the first exponent of the “bourgeois” ideology. Many authors have seen Robinson as the archetypal expression of the Protestant work ethic.⁷

In the composition of his material world, Robinson absolutely avoids any reference to—or reminder of—the institutionalized forms of culture. Effectively speaking, he never seeks a cultural legitimization for the objects he produces: the very idea of such legitimization would seem senseless to him. When he decides, for example, to make himself an umbrella, he does not set out to create an object of “art” or of “artistic craftsmanship,”⁸ but simply to make a device that will protect him from the sun and the rain, and that can be closed at will.

The scarcity of resources, and the lack of materials and tools, make his task extremely difficult. To attempt it, Robinson drastically revises his creative strategy: in such adverse conditions, he cannot follow a traditional approach. He cannot, in fact, start with a generic idea of an umbrella—the umbrella “once seen in Brazil”—from which to launch a series of partial inventions whose sum will be the umbrella-object. The path he selects is, obviously, another: reducing the volume of the partial inventions to a minimum, and trying to find in nature—“ready-made,” as it were—the constituent parts of his future umbrella.



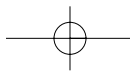


But this procedure requires knowing how to observe nature with a new, more belligerent gaze (i.e., knowing how to see every piece of reality as a potential piece of an umbrella). In this design option the utilitarian stance of Robinson would appear to be fully confirmed. He behaves, definitively, like a predator for whom everything is potential prey: every object, and every fragment of reality, every phenomenon observed is immediately interpreted in terms of its usefulness. For Robinson, in other words, there exists no clear line of demarcation between the rationality of the ends and the rationality of the means. In this vision, there is no place, nor time, for any premises based on values of any kind.

Of course, Robinson often calls upon his rich store of religious sentiment. He frequently invokes God, makes reference to the Bible, prays, thanks Providence, and makes moral judgments from a clearly Puritan point of view.⁹ But all this doesn't seem to affect his way of thinking about project activity, decidedly oriented toward utility and absolutely indifferent to ethical and aesthetic judgments. Neither does it influence his attitude of extreme objectivity, of total detachment, with which he observes the relationship between his work and the resulting products. Marx, in *Das Kapital*, makes an ironically positive assessment of this attitude, to the point of crediting Defoe's character with a certain contribution to political economics, or more precisely to the "theory of value."¹⁰

Let's look at another enlightening example. As soon as he reaches the island, Robinson knows he will have to build a shelter as soon as possible. But, from the outset, he also is aware of the difficulties involved: he must do it immediately, but he doesn't know where, how, and—above all—with what means. With the exception of some pieces of the wrecked ship, the means available are very limited indeed. Moreover, this lack of materials is accompanied by a lack of knowledge. Robinson, in the first days, knows nothing about the island. And this makes his undertaking even more problematic: he has to build a defensive structure capable of fending off the hostile forces of the environment, but he is not yet able to evaluate the real dangers—their force of impact, their quantity, the frequency of their attacks—and it is hard for him to decide on the requirements of consistency and size of his shelter. It is difficult to define its physical characteristics: on the one hand, he mustn't run the risk of making it too small, and, on the other, he cannot afford the luxury of making it too big.

Here again, as in the case of the umbrella, he must assume an attitude of voracious utilitarian appropriation of the surrounding environment. Here again, the dramatic immediacy of the problem to be resolved strongly conditions, in a reductive way, his design behavior: for him, the shelter is just a shelter, no more and no less. It never occurs to him, in other words, that his refuge could be a "work of architecture." And the result of his efforts demonstrates this: "a tent placed beneath a wall of stone and surrounded by a





sturdy enclosure of wooden posts and ropes.” A creation which, we should immediately note, could hardly meet with the immediate, unreserved acceptance of all as a “work of architecture.” At best, we could include it in the category of that “architecture without architects” which Bernard Rudofsky has called “nonpedigreed architecture.”¹¹

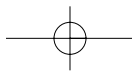
At this point, we might ask: can these two approaches to the project identified by Defoe in the late 1600s and the beginning of the 1700s—that of *An Essay Upon Projects* and that of *Robinson Crusoe*—be useful to nourish the present-day debate on the role of design? The answer, probably, is yes. There is little doubt that, with a few adjustments and adaptations, the questions raised at the time by Defoe also can be applied to our time.

Just consider the argument—central to the *Essay*—on the unavoidable need to confront the problems of society with a project-oriented approach. This position, yesterday and today, has its weak points: speaking generically of making projects without mentioning specific interventions can lead to a sort of self-satisfaction regarding a duty fulfilled, when actually what has been done exists only on the plane of verbal urgings, without any concrete impact.

This is the very weakness that can be found in Defoe’s essay. What is the purpose of a hypothesis of project capacity seen as “methods of civil policy” when, after all, these methods turn out, in practice, to be incapable of contributing to a true change of “civil policy” as a whole?¹² To tell the truth, Defoe doesn’t overlook this issue. He himself mentions the danger of a project that is developed at the margins of the major social institutions, without any direct impact on those centers of power that decide on “the immediate Benefit of the Publick, and Employing of the Poor.”

To avoid this risk, Defoe proposes, in the *Essay*, not just one “project,” but many “projects” of institutes and structures serving the community, such as academies for the study of the English language, for the education of women, for the professional training of military leaders; credit institutes under the control of a central bank; a street network capable of guaranteeing intensive mobility of persons and goods, financed by the contribution to the “costs of urbanization”—as we would put it today—on the part of the landowners in the areas concerned; a system of taxation that includes, although in an as yet confused form, the present distinction among excise, taxation and duties; and an institute of mutual aid to protect merchants against the risks and effects of failure.

In this way, Defoe imagined it possible to persuade the centers of power of the time to effect a fairer reorganization of the social order. But this attempt, too, remained abstract and, all told, inconclusive, for the simple reason that it is not possible to create institutes or service structures only through the dictates of a project, and it is even less possible to change the world exclusively by *diktat*.





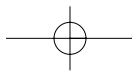
This is the criticism that always has been made of the project approach inspired by the “enlightenment.”

In recent times, in a generalized way, there is a tendency to make an exaggerated extension of this otherwise pertinent critique, to the point of invalidating any form of project activity. This tendency stems from the error of identifying “project” with “ideology,” or “project” with “plan.” We feel this is a grave error. Undoubtedly, the most misleading positions that have emerged in the recent debate on the project can be traced back precisely to this error. In practice, they have banalized, and even obscured, an important subject for theoretical reflection. Suddenly, the project is no longer seen as that activity that seeks to offer innovative solutions for the problems of the society and, therefore, it is no longer a factor of “innovative progress,” as L. Sklair puts it,¹³ but an activity of treacherous low-enlightenment ideologues (or wild utopians) straining at the bit to impose their totalizing designs (or dreams) upon humankind in general. The act of the project is stigmatized, leading to an indiscriminate rejection of project-oriented behavior, as we have seen. But what is overlooked here is the fact that, for better or worse, our era is one of design, and of projects—a “projecting age,” as Defoe called it three centuries in advance—perhaps the most “projecting” of all the eras of history.

As an example, let’s look at the case of the most recent developments in data processing technology, now in the process of radically altering the premises that, for thousands of years, have formed the basis for our material and social practices. These developments are certainly the result of an unprecedented level of technical-scientific creativity, but also of an unprecedented project-oriented industriousness. The same is true of other important developments in modern technology. Because one thing is obvious: in a world of technical objects and processes, as our world is becoming, to an increasing extent, project activity and its results are omnipresent. In this context, the anti-project rhetoric can only have one meaning: an acritical capitulation in the face of project activity that, in any case, is going to get done.

There also is a trend (or a movement) that makes the project-oriented behavior of Robinson Crusoe into a veritable behavioral model for our time. Thus, Robinson becomes the ideal archetype of a new project mode that, in contrast with the dominant methods today, does not make use of sophisticated technical and scientific knowledge, nor does it attempt to create objects of great structural and functional complexity; a new way of designing, therefore, that focuses on the elementary nature of the resources utilized and the simplicity of the solutions envisioned.

In this context, Robinson is introduced as a forerunner of the “poor technologies,” and an *avant la lettre* exponent of a design that explicitly rejects the institutional conditioning of the “rich technologies.” But these theorists tend to forget the fact that Robinson is a



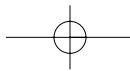
fictional character and, as such, he contains a high level of artifice.¹⁴ He is not free of all forms of institutional conditioning, as Defoe would have us believe, because he cannot escape from the subtle conditionings of the society to which he belonged before the shipwreck, a society to which, like it or not, he continues to pay tribute: the English society of the time of Lord Walpole, and that of Defoe. A closer look shows that the poor technology of Robinson is, if anything, a version of the emergence of the rich technology of Defoe's time.

Naturally, today's champions of the poor technologies see Robinson (correctly enough) as one who rebels against the unjust conditionings of the institutions of his time. On this subject, we should recall that, in *Serious Reflections During the Life and Surprising Adventures of Robinson Crusoe*,¹⁵ published in 1720, one year after the *Adventures* (25 April 1719) and the *Farther Adventures* (20 August 1719), Defoe offers a glimpse of a different interpretation key for his novel: the life of Crusoe is merely the allegorical version of the tormented life of a person who really existed, the life of a man who "has suffered all manner of violences, of oppressions, of injurious reproaches, contempt of men...."

This person, he clearly intimates, is not the Scottish mariner Alexander Selkirk, alias Robinson Crusoe, but Defoe himself,¹⁶ that Defoe who is the skillful prompter of "all manner of violences." Because the creator of Robinson Crusoe was not only a novelist, essayist, and journalist of great genius, but also an unscrupulous advisor of powerful men, a bankrupt businessman hounded by creditors, a pamphleteer imprisoned for libel and then released... and a secret informer.

Nevertheless, the alternative that emerges from the two design philosophies of Defoe—the one explicitly formulated in *Essay* and the one outlined in the behavior of the character of Robinson—is not a modern one. The problems that face us today cannot be approached, and certainly not resolved, in terms of the acceptance or rejection of the institutions. Our most pressing problems, we should recall, are those related to war, the environment, and hunger, but also to freedom, equality, and dignity. Some of these problems, as we know, are institutional in nature. Others are only partially so, and still others are not institutional at all.

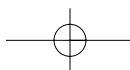
Defoe's *Essay Upon Projects* is the work of a maker of "Honest Projects" who lived in the particularly turbulent period of the birth of the bourgeois society. Reflection on this Defoe can help us to evaluate the possibility (and, above all, the probability) of developing "Honest Projects" in an era such as our own, an era in which the enormous complexity of the problems to be resolved puts our capacity to "project" to the hardest of tests every day.



- 1 D. Defoe, *An Essay Upon Projects* (Menston: The Scholar Press Limited, Menston 1969). This is a facsimile version of the original text published in London in 1697 by Th. Cockerill, and reprinted in 1700 with the title *Several Essays Relating to Academies*, and in 1702 as *Essay Upon Several Projects*. For a thorough analysis of this text, see W. Sombart, *Der Bourgeois. Zur Zeitgeschichte des modernen Wirtschaftsmenschen* (1913) (München: Verlag von Duncker und Humblot, München 1923). Importance can be attributed, above all, to Sombart's reflections on the "makers of projects" (*Projectanten*) in the 1600s and 1700s, toward whom Defoe assumes a critical stance of dialectical confrontation in his *Essay*. Defoe, in fact, openly takes his distance from these "makers of projects," who, in his opinion are a veritable scourge. He believed, with few exceptions there are unscrupulous peddlers of "dishonest projects," who should not be confused with those who, like Defoe himself, develop "Honest Projects" for the progress of the society of their time and of the future. The idea of a project approach which, coherently exercised at all levels of reality, can be a factor for modernization, represents the fundamental nucleus of this work.
- 2 In this text, we have used D.D., *The Life and Adventures of Robinson Crusoe. Written by Himself*, (London: Sands and Co., 1899), and also D.D., *Robinson Crusoe*, (London: Dent-Everyman, 1977), an edition based, as is well known, on the Shakespeare Head Press Edition, Oxford, 1927.
- 3 D. Defoe, *An Essay...*, 2.
- 4 *Ibid.*, 1.
- 5 The solitude and isolation of the individual is a recurring theme in the narrative (and not only narrative) universe of Defoe. Characters such as Robinson, Captain Singleton, Moll, Colonel Jack, and Roxana all have chosen an insular state. And this isolation is seen as an individual tactic (or, better, as a strategy) for survival, like a protective buffer against a menacing world. But it also

should be said that the menacing world with which Robinson must come to terms is not the same as that of Defoe's other characters. While the solitary Robinson grapples with the "world of nature," it is the "world of men" that engages the "loners" Singleton, Moll, Jack, and Roxana. The opposition between the world of nature and the world of men can be insufficient or misleading, however. It does not account for the relationship between "state of nature" and "natural man": a relationship which, as we know, was at the center of the important philosophical (and philosophical-political) debate of the 1600s and 1700s in England. Defoe was, to some extent, a protagonist in this debate but, above all, he was an interpreter, although not always faithful, of the various positions in the conflict. See the exhaustive treatment of this subject in M. E. Novak, *Defoe and the Nature of Man*, (Oxford: Oxford University Press, 1963). Defoe, like Locke, was strongly attracted by two political philosophies of an opposing character: that of Th. Hobbes and that of R. Cumberland. According to Novak, Defoe's idea of the "natural condition of humanity" (Locke) is simply a cross between the *lupus* of Hobbes and the *agnus* of Cumberland. This is because Defoe could not be unaware, and did not ignore, the difficulties of espousing only one or the other of these political philosophies. On the one hand, Robinson doesn't allow himself to be squeezed into the categories of Hobbes: he is a "natural man" in solitude and solitude, as we know, is not seen favorably by Hobbes. Cfr. Th. Hobbes, *Leviathan* (1651). On the other, Cumberland (*De legibus naturae*, 1672), the faithful propagator of the thinking of the Dutch H. Grotius (*De jure belli et pacis*, 1625) could never have accepted Robinson as his prototype of natural man. Robinson is not sufficiently independent of the "commands of the rulers" although, in his case, the rulers are not physically present on the island, but only in the baggage of "moral" values he has brought with him. Cfr. F. Chapman Sharp, "The Ethical System of Richard Cumberland and Its Place in the History of British Ethics," *Mind* XXI: 83 (1912): 371–398.

- 6 L. Terzi, preface to the Italian edition of *The Life...* (Milan: Adelphi, 1963): xii.
- 7 P. Coliaco, *Biografia del personaggio nei romanzi di Daniel Defoe* (Rome: Bulzoni, 1975), 47: "For Robinson, every product of his activity seems to reveal its own most intrinsic nature as a product of work, and work seems to appear to him as 'time of work.'" This is true, but excessive simplification on this subject can lead us away from the reality of Defoe's thinking. Moreover, extreme caution should be used regarding the very widespread thesis according to which Defoe's support for the work ethic can be explained "totally" in terms of the Protestant ethic. Cfr. M.E. Novak, "Robinson Crusoe and Economic Utopia," in *Kenyon Review* 25 (1963): 474–90. Although the Protestant work ethic appears in Defoe and in Robinson, as Novak correctly emphasizes, in a very pale shading, today, many continue to see the "active vocation" of Robinson as one of the essential characteristics of the "emerging bourgeois" and, therefore, as a proof of the Protestant roots of the "spirit of capitalism." This is a line of interpretation that makes an appeal, as we know, to Max Weber, for whom the origins of capitalism should be sought above all in the Protestant ethic (i.e., in the sanctification of labor, asceticism, austerity, etc.). See the famous essay by M. Weber, "Die protestantische Ethik und der 'Geist' des Kapitalismus" in *Archiv für Sozialwissenschaft und Sozialpolitik* XXI (1905): 1–110. It is well known, however, that Weber's version of the origins of capitalism never has been totally accepted by scholars of the subject. For example, W. Sombart has offered a different version. See W. Sombart, *Luxus und Kapitalismus* (München: Verlag von Duncker und Humblot, 1913).



- 8 Defoe always was rather distrustful of art. He is a "puritan suspicious of art," as Anthony Burgess puts it. This is the same factor discussed by James Joyce in the famous conference held in Trieste in 1912, now published in D.D., *Robinson Crusoe* (Turin: Einaudi, 1963). But in the case of Robinson, Paul Valéry offers a more subtle version, making a distinction between an early Robinson, the one we meet just after the shipwreck, still in the impoverished phase, and another Robinson, the one in the phase of security and abundance. Regarding the latter, he writes: "A well-made dwelling, plentiful supplies, essential securities rediscovered—all this leads, as a consequence, to the possibility of having 'free time' (*loisir*). In the midst of these assets, Robinson became a man once again, or namely an indecisive animal, a being that mere circumstances are not sufficient to define. He breathed distractedly. He didn't know which phantoms to pursue. He was threatened by the fate of devoting his time to letters and the arts." P. Valéry, "Histoires brisées. Robinson. Le Robinson oisif, pensif, pourvu in *Oeuvres* (Paris: Gallimard, 1960), 412.
- 9 Cfr. M. Praz, "Defoe e Cellini" in *Studi e svaghi inglesi* (Firenze: Sansoni, 1937). On this subject, Praz points out: "Although Robinson insists that he is constantly occupied with religious thoughts, what is admirable in him is not his contemplation, but his action" (p. 38); "Robinson... prays a good deal, but he acts even more" (p. 39); "his moralistic fervor is little more than a feeble *posteventum* reflection" (p. 52).
- 10 Cfr. S.S. Prauer, *Karl Marx and World Literature*, (Oxford: Oxford University Press, 1978), 335. For the economic implications of the fiction and essays of Defoe, see K. Polanyi, *The Great Transformation* (New York: Rinehart, 1944): "Defoe had individuated the truth that seventy years later Adam Smith may or may not have understood." These assessments, very widespread today, are not shared by M.E. Novak, *Economics and Fiction of Daniel Defoe* (Berkeley: University of California Press, 1962). Novak sees Defoe as one of the most vigorous defenders of the mercantile system. Cfr. also M.E. Novak, *Robinson Crusoe and Economic Utopia*, Novak harshly criticizes those economists who have attempted to "use Crusoe as a hero for their parables" (p. 477). On the position of Defoe regarding the theme of pauperism and charity, see the stimulating introduction by V. Accattatis to D.D., *Fare l'elemosina non è carità, dare lavoro ai poveri è un danno per la nazione* (Milan: Feltrinelli, 1982). Categorizing Defoe, in the present-day view, among the conservatives of his time is a judgment that, like all other judgments on Defoe, is subject to discussion.
- 11 B. Rudofsky, *The Prodigious Builders*, (London: Secker and Warburg, 1977), 18.
- 12 Cfr. M. Apollonio, "Defoe," *La Scuola*, Brescia 1946. Apollonio writes: "While today we are amazed by the intrinsic validity of his schemes... his contemporaries, and especially the bureaucratic revisers of his proposals, could willingly have done without them" (p. 84).
- 13 L. Sklair, *The Sociology of Progress* (London: Routledge and Kegan Paul, 1970), 117.
- 14 Nevertheless, one must be very cautious on the subject of the artificiality of Defoe's characters, because the most striking thing about his fiction is the high level of plausibility of his stories. This made him one of the great forerunners of realism, or of a "visionary realism," as Terzi correctly defines it, or of a "magical realism," in Apollonio's view. De Quincey admired Defoe for that "air of verisimilitude" of his narration [P. Rogers, ed., *Defoe. The Critical Heritage*, (London: Routledge and Kegan Paul, 1972), 118]; and J.L. Borges speaks of the "novelas exasperadamente verosímiles de Daniel Defoe" (*Discusión*, Buenos Aires: Gleizer, 1932), 97). Borges knows, perhaps better than anyone, how the maniacal description of the detail—typical of Defoe, and also of Borges himself—leads, sooner or later, to the fantastic.
- 15 D. Defoe, "Serious Reflections During the Life and Surprising Adventures of Robinson Crusoe: With his Vision of the Angelick World" in *Novels and Selected Writings of Daniel Defoe* (Oxford: Shakespeare Head Press, 1927).
- 16 The life of Defoe is, in fact, a long sequence of misadventures and troubles of all kinds, many of which, it should be said, were not exceptional events in the existence of "men who lived by the pen" in that period in European history. What is important is to know how these personal misfortunes were interpreted (and, at times, made into raw material for creativity) by those subjected to them. It is a delicate point. It may be useful, in this case, to make a comparison (or to look for similarities and differences) between personalities who had similar careers, full of vicissitudes. This is the method used by Schwob, who compares Defoe and Cervantes, and by Praz, who compares Defoe and Cellini. In Defoe as in Cellini (but not in Cervantes) there is a strong sense of self-commiseration. But it is a self-pity that should not be confused with resignation. Neither Defoe nor Cellini belongs to that category of resigned victims who, in a certain sense, congratulate themselves on their own unfortunate status.