# Unit Three

## Special Topic about Industrial Design

# Lesson 7　Raymond Loewy and His Designs

Raymond Loewy (1893—1986) has been called "the man who shaped America". His designs helped to "streamline the sales curve".[1] Loewy's long and prolific career spanned nearly 60 years.

Loewy was born in Paris in 1893, where he was educated and received a degree in engineering. He emigrated to the U. S. in 1919 to pursue a career in graphic design, and, for most of his life he maintained houses in both countries.

His first jobs were window dressing. Loewy moved on and made a successful career as an illustrator for vogue. It was not until 1929 that Loewy received his first major commission with the redesign of the gestetner duplicating machine. He established his own firm in 1930 and in 1944, he formed Raymond Loewy associates with five partners.

During his lifetime Loewy's company worked for numerous private companies as well as governments, and his designs have had a major effect on the man-made environment. Products he has been responsible for range from cars, ships, aeroplanes, buildings to products such as toothbrushes and pens. Served as consultant to numerous corporations including Coca Cola, United Airlines, Shell, Exxon, IBM, BMW, GM and NASA.[2]

"Between two products equal in price, function, and quality, the better looking will outsell the other." He proved that the success of a product is as dependent on aesthetics as function. "The goal of design is to sell," he said, "the loveliest curve I know is the sales curve."

It is estimated that at the peak of his career over 75% of Americans came into contact with one or more of his products every day.

### *Coca Cola*

Raymond loewy said, "the Coke bottle is the most perfectly designed package in the world."

Loewy worked for the Coca Cola company for decades, designed several Coke related products, and even redesigned the famous bottle in 1954. His contribution to that particular icon, the original contour of the "mae west" bottle, was to "slenderize" the already existing version, giving it a more refined silhouette and

making it sexier to a new generation.

He was also responsible for designing the dispenser for Coca Cola in 1947, as well as the super dispenser in 1951.

### *Shell oil company's logo*

the pecten history from 1900 to today

In 1967, the Shell company approached Loewy with a design problem—its emblem was difficult to distinguish from a distance, or in poor lighting. The pecten symbol currently in use worldwide was designed in 1971 by Loewy.

The design and testing process completed by Loewy's firm took more than four years. One of the tests involved hanging various prototype pectens on poles where they could be viewed by drivers passing on a nearby motorway. Drivers were later contacted for their opinions on the prototypes. [3]

### *Greyhound bus*

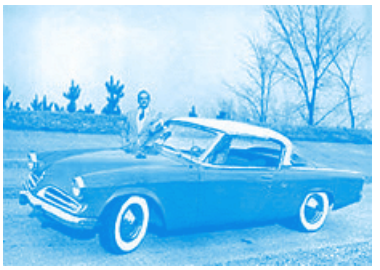
Loewy was first approached by the Greyhound corporation to redesign its logo. The company's logo looked like a "fat mongrel", he said. So, he created a slimmed-down version that is still used today.

Later he developed the design for Greyhound's scenicruiser motorcoach. He and his team built a full size mock-up complete with seats and a washroom.

### *Studebaker*[4]

Loewy had started with Studebaker in 1936 as a consultant for exteriors. He countered the U. S. car industry's preference for chrome and tail fins: the cars he referred to as "jukeboxes on wheels". [5]

In 1953 Paul Hoffman, then president of Studebaker, commissioned Raymond Loewy to design a car for the "younger segment of automobile users". The starliner would later be known as the "first American sports car".


Studebaker's starliner

Though Loewy usually receives the credit, the actual design of the car was largely done by Robert E. Bourke (1916—1996) who headed the Raymond Loewy associates Studebaker operation in south bend, Indiana from 1949 to 1955.

The starliner's innovative appearance included:

— a longer, wider and lower appearance than what was standard at the time;
— limited use of chrome;
— a sloping nose; and
— a concealed radiator.


Studebaker's avanti

He also designed Studebaker's last car before its demise, the avanti of 1961/1962, a sleek, futuristic sports car (avanti, Italian for "forward"). Sherwood Egbert, the new president of Studebaker, hired Raymond Loewy to help energize Studebaker's soon-to-be released line of 1963 passenger cars to attract younger buyers. Loewy agreed to take on the job, despite the short 40-day schedule allowed to produce a finished design and scale model.[6] The car received rave reviews, but because of a series of production problems, the public had to wait to drive it. Studebaker corporation closed in 1963, and it wasn't until 1965, when the avanti motor corporation was formed, that the avanti went back into production. His main direction included the following points:

— minimize chrome ;
— avoid decorative moldings ;
— accent the wedge-shaped silhouette;
— stress long, down-slanted hood ;
— abbreviate the rear and tuck it under;
— place instrument panel overhead, above windshield as in aircraft;
— install aircraft-type knobs and levers on the console ;
— pinch the waistline, as Le Mans[7]-type racing cars;
— design hoods with an off-center panel ;
— accent spacecraft "reentry curve" wheel openings;
— simple disc wheels.

### *Skylab*

Loewy himself considered his "habitability studies" for NASA's Skylab, conducted from 1967 to 1973, to be the most important work of his entire career.

Assisted by a substantial design team, he devised means of promoting both sociability and privacy among astronauts on long missions, argued for the inclusion of a viewing porthole, this allowed the astronauts to have a view of earth while in space, and suggested ways of handling nutrition, hygiene and elimination during the extraordinary condition of weightlessness.[8]

Loewy also installed a triangular dining table, so that no man from the three-person crew could be at its "head". He felt that in a three-man crew it was vital that no man, however unconsciously, should dominate the others.

Raymond Loewy was founding member and fellow of the American Society of Industrial Designs (president 1946). He published his autobiography in 1951, and authored "industrial design" in 1979.

## Words and Expressions

1. streamline ['stri:mlain] *adj*. 流线型的 *v*. 使呈流线型
2. prolific [prə'lifik] *adj*. 多产的，丰富的
3. span [spæn] *v*. 横越
4. emigrate ['emigreit] *vt*. (使)移民
5. pursue [pə'sju:] *vt*. 追赶，追踪，追击，继续，从事
6. vogue [vəug] *n*. 时尚，时髦，风气，流行
7. commission [kə'miʃən] *n*. 委任，委托
8. redesign [ˌri:di'zain] *v*. 重新设计
9. establish [is'tæbliʃ] *v*. 建立
10. numerous ['nju:mərəs] *adj*. 众多的，许多的，无数的
11. range [reindʒ] *n*. 山脉，行列，范围，射程
12. serve [sə:v] *v*. 服务，服役，供职，招待
13. consultant [kən'sʌltənt] *n*. 顾问，商议者，咨询者
14. outsell [aut'sel] *vt*. 卖得比……多
15. aesthetics [i:s'θetiks] *n*. 美学，审美学
16. estimate ['estimeit] *v*. 估计，估价，评估
17. peak [pi:k] *n*. 山顶，顶点，帽舌，(记录的)最高峰
18. decade ['dekeid] *n*. 十年，十
19. Mae West [mei'west] *n*. [俚](飞行员飞越海面时穿的)救生背心，此处喻指曲线优美
20. dispenser [dis'pensə] *n*. 自动售货机
21. slenderize ['slendəraiz] *v*. 使细长，使苗条
22. refined [ri'faind] *adj*. 精制的，优雅的，精确的
23. silhouette [ˌsilu(:)'et] *n*. 侧面影像，轮廓
24. sexy ['seksi] *adj*. 迷人的
25. approach [ə'prəutʃ] *vt*. 接近
26. emblem ['embləm] *n*. 象征，徽章
27. distinguish [dis'tiŋgwiʃ] *v*. 区别，识别
28. pecten ['pektən] *n*. 扇贝
29. prototype ['prəutətaip] *n*. 原型
30. contact ['kɔntækt] *vt*. 接触，联系
31. Greyhound ['greihaund] *n*. 美国灰狗长途汽车
32. mongrel ['mʌŋgrəl] *n*. 杂种狗
33. scenicruiser ['si:niˌkru:zə(r)] *n*. [美]豪华长途旅游列车
34. motorcoach ['məutəkəutʃ] *n*. 公共汽车

35. mock-up *n.* 实物大模型
36. washroom ['wɔʃrum] *n.* 盥洗室，[美]厕所
37. exterior [eks'tiəriə] *n.* 外部，表面，外形
38. counter ['kauntə] *vt.* 和……相反，反对，提出抗衡的计划
39. chrome [krəum] *n.* 铬，铬合金
40. tail fin [teil'fin] *n.* 尾鳍
41. jukebox ['dʒu:kbɔks] *n.* 自动唱片点唱机
42. credit ['kredit] *n.* 声望，荣誉
43. head [hed] *vt.* 作为……的首领
44. operation [ˌɔpə'reiʃən] *n.* 运转，操作，实施
45. sloping ['sləupiŋ] *adj.* 倾斜的，有坡度的
46. conceal [kən'si:l] *vt.* 隐藏，隐蔽
47. radiator ['reidieitə] *n.* 散热器，水箱
48. demise [di'maiz] *n.* 死亡，转让
49. sleek [sli:k] *adj.* 圆滑的
50. futuristic [fju:tʃə'ristik] *adj.* 未来派的
51. energize ['enədʒaiz] *vt.* 使活跃，给予精力，加强
52. rave [reiv] *adj.* (非正式)吹捧的，狂热的
53. molding ['məuldiŋ] *n.* (装饰用的)嵌线，壁带
54. accent ['æksənt] *vt.* 强调
55. wedge-shaped 楔形
56. stress [stres] *vt.* 着重，强调
57. slant [slɑ:nt] *v.* (使)倾斜，歪向
58. abbreviate [ə'bri:vieit] *v.* 缩写，缩短
59. rear [riə] *n.* 后面，后方
60. tuck [tʌk] *vt.* 挤进，塞，使隐藏
61. knob [nɔb] *n.* 球形门把手，旋钮，调节器
62. lever ['levə] *n.* 杆，杠杆，控制杆
63. console [kən'səul] *n.* 控制台
64. pinch [pintʃ] *vt.* 修剪，使萎缩
65. hood [hud] *n.* 引擎罩
66. panel ['pænl] *n.* 面板，嵌板，仪表板
67. habitability [ˌhæbitə'biləti] *n.* 可居住
68. devise [di'vaiz] *vt.* 设计，发明，图谋
69. means [mi:nz] *n.* 手段，方法
70. promote [prə'məut] *vt.* 促进，发扬
71. sociability [ˌsəuʃə'biliti] *n.* 好交际，社交性，善于交际
72. mission ['miʃən] *n.* 使命，任务
73. argue for 赞成；为……而力争
74. porthole ['pɔ:thəul] *n.* 舷窗
75. nutrition [nju:'triʃən] *n.* 营养，营养学

76. hygiene ['haidʒi:n] *n.* 卫生，卫生学
77. elimination [i,limi'neiʃən] *n.* [生理学]排泄(体内废物)
78. weightlessness *n.* 失重状态
79. crew [kru:] *n.* 全体人员
80. vital ['vaitl] *adj.* 重大的，至关重要的
81. unconsciously [ʌn'kɔnʃəsli] *adv.* 无意中，不知不觉
82. dominate['dɔmineit] *v.* 支配，占优势
83. fellow ['feləu] *n.* 学会，(学术团体的)特别会员
84. autobiography [,ɔ:təbai'ɔgrəfi] *n.* 自传

## Notes

1. Raymond Loewy (1893—1986) has been called "the man who shaped America". His designs helped to "streamline the sales curve". 雷蒙德·洛韦(1893—1986)被称作"为美国塑型"的人。他的设计对于商品销售有很大的助益。"the man who shaped America"指雷蒙德·洛韦塑造的产品形象成为美国的象征；"streamline the sales curve"指雷蒙德·洛韦的设计导致销售曲线发生对比强烈的变化，意即大大推动了产品的销售。

2. IBM，(International Business Machines)，(美国)商用机器公司；BMW：Bavarian Motor Works，德国宝马汽车公司；GM：General Motors Corporation，(美国)通用汽车公司；NASA：National Aeronautics and Space Administration，(美国)国家航空航天局。

3. One of the tests involved hanging various prototype pectens on poles where they could be viewed by drivers passing on a nearby motorway. Drivers were later contacted for their opinions on the prototypes. 其中一项测试包括将不同形态的扇贝原型挂在柱子上以便使附近机动车道上经过的司机能看到它们。接下来就是征求司机们的意见。

4. Studebaker：克雷芒·斯多德巴克尔(1831—1901)，美国制造商，1852 年创办的家族产业成为世界上最大的马拉车制造业，后来生产汽车。

5. Loewy had started with Studebaker in 1936 as a consultant for exteriors. He countered the U. S. car industry's preference for chrome and tail fins: the cars he referred to as "jukeboxes on wheels". "1936 年，洛韦成为斯多德巴克尔公司的外观顾问。他反对当时美国汽车界偏好铬合金与尾鳍式样的倾向，他把这类车称作'架着轮子的留声机'。"这儿，exterior 指的是"外形"。

6. Loewy agreed to take on the job, despite the short 40-day schedule allowed to produce a finished design and scale model. 洛韦答应了，尽管只有四十天时间来拿出完稿并做出成比例的模型。

7. Le Mans：勒芒，法国西北部一城市，位于巴黎西南。因其每年一度(开始于 1906 年)的 24 小时全天赛车而闻名。

8. Assisted by a substantial design team, he devised means of promoting both sociability and privacy among astronauts on long missions, argued for the inclusion of a viewing porthole, this allowed the astronauts to have a view of earth while in space, and suggested ways of handling nutrition, hygiene and elimination during the extraordinary condition of weightlessness. 在一个扎实的设计团队的配合下，他提出了不少措施以满足宇航员于漫长的行程中在交际与隐私两方面的需求，他提出应增设一个用于观景的舷窗，这可以让宇航员在太空中也可以看到地球，他还采取各种手段以应对失重特殊条件下的营养、卫生与生理排泄问题。”

## Exercises

Topics for oral discussion.

1. What do you think about the viewpoint of Raymond Loewy that “the loveliest curve I know is the sales curve”?
2. Could you give more examples of designs of Raymond Loewy or other masters of industrial design?

# Lesson 8　Achille Castiglioni

Italian architect and designer Achille Castiglioni was born in 1918. During his fifty-two-year career, he has designed and collaborated on almost 150 objects, including lamps, stools, bookshelves, electrical switches, cameras, telephones, vacuum cleaners, and car seats. Several of his works, such as the Arco and the Brera lamps, are featured in the design collections of many museums. They are also familiar to many people who use them in their homes, even if Castiglioni's name may not be. His work, which has had a powerful impact on the history of the applied arts and has taught generations about good design, provides an overview of the characteristics that make design one of the highest expressions of twentieth-century creativity.

Achille Castiglioni in his studio, under an "Arco" lamp

Immediately after graduating from the Architectural School of the Polytechnic of Milan in the late 1930s, Achille Castiglioni's two older brothers opened an office in the city. As with many other Italian architects at that time, the lack of major architectural assignments led them to concentrate on smaller-scale design projects such as interiors, exhibition installations, furniture, and objects. Achille joined his brothers as a licensed architect after the close of World War II. The clarity and wit that characterizes their combined efforts is also evident in Achille's solo production from 1968 to the present day.[1]

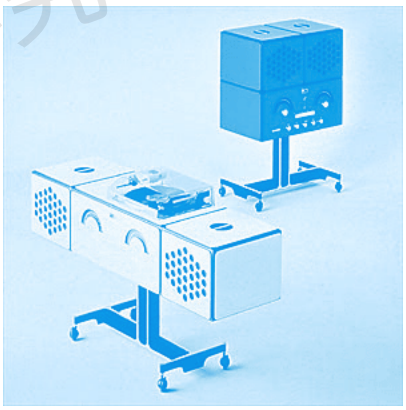
Castiglioni's creative method seems so lucid and logical it could be an example taken from a manual on the design process, but only a designer with skill and experience can achieve the leap from a sound, well-reasoned process to a beautiful working object. Castiglioni nonetheless acknowledges the standard principles of his practice: "Start from scratch. Stick to common sense. Know your goals and means." In other words, the designer must not take for granted any previous similar object, must understand the reason for creating a new product or improving an existing one, and must be aware of the available resources.[2] For each object, the designer then has to "try to find a Principal Design Component, and build upon it."

Castiglioni loves paradoxes and the new perception and wisdom they can engender. One example is the Sella (saddle), the pivoting stool designed with Pier Giacomo in 1957, which garnered the Castiglionis an incongruous "Dadaist[3]" label because of its use of an already existing, everyday object in an unexpected context. The Sella is made of a leather bicycle seat,

Mezzadro seat, right behind is Sella stool

a tubular metal stem, and a rounded cast-iron base. Its inspiration induces smiles: "When I use a pay phone," says the designer, "I like to move around, but I also would like to sit, but not completely." The Principal Design Component was in this case a new behavior, a consequence of a more probing understanding of an object's combined form and function, which is often the focus of Castiglioni's work.[4] "I try to suggest different behaviors," he has declared, expressing his idea that the designer must be the interpreter of both real and virtual needs. Virtual needs, just the means to a consumers' market.

His ideas are often inspired by everyday things, and the statement "Design demands observation" has become one of his many mottos. A street lamp was the springboard for the famous Arco lamp (1962), in which the light source is projected almost eight feet away from the marble base as if it were coming from the ceiling.[5] While the Toio lamp (1962) was based on a car's front reflector. The idea for an object sometimes comes to Castiglioni while he is working on an entirely separate assignment. Ideas can also derive from technological advances, like the introduction of the thin fluorescent tube which suggested the Tubino lamp (1951).



RR 126 stereo system

Castiglioni himself divides his work into various groupings. The Sella belongs to the category of Ready-made Objects, as do the Mezzadro (1957)—a stool composed of a mass-produced tractor seat, a bent steel bar, and a wing screw. His Ready-made Objects evolve like living things: the components of the Mezzadro stool have been updated as the manufacture of tractor seats has changed without damaging the purity of the object.[6] Castiglioni refers to another grouping as Redesigned Objects, meaning traditional objects that he has perfected or updated according to current needs and technological developments. These include his outdoor caf tables (Cumano,1979), ashtrays (Spirale, 1971),and bedside tables (Comodo,1989). The Minimalist group contains his so-called Expressionistic Objects, such as the RR126 stereo system of 1966, endowed with eyes, movable ears, and a mouth.

Castiglioni's design approach can best be understood within the context of the cultural climate of which he was a product, and which he in turn helped to shape.[7] Like other Italian designers and architects such as Marco Zanuso and Ettore Sottsass, he benefited from a fortuitous combination of trends that has made Italian design a worldwide force. In part

because Italian culture has always been founded on a tradition of the fine arts and of skillful craftsmanship, and in part because the disruption of World War Ⅱ had created a need for newly designed and produced objects to restore the country's quality of life, Italy was poised for a design renaissance in the 1950s.[8] The seemingly disparate sectors of culture, technology, and the economy enjoyed harmonious cooperation toward the common goal of rejuvenation.[9] Talented architects still looking for commissions met ambitious manufacturers eager to bring their pre-existing companies up to date or to boost their new enterprises. The relatively small size of their family-based companies and their attention to detail and craftsmanship caused them to take risks and embrace innovative design.[10] These manufacturers put at the designers' disposal all their technical skill and resources, along with their knowledge of the technological breakthroughs occurring in the postwar period.[11] The long-lasting relationships between designers and manufacturers that were established during that time — like those between Zanuso and Brionvega (television manufacturer), between Sottsass and Olivetti (typewriter and computer manufacturer), or between the Castiglionis and Flos (the lighting fixtures company)—were based on shared creative vision and understanding.[12]

Castiglioni has often said, "What you need is a constant and consistent way of designing, not a style." His own way has been to focus on understanding objects, basing his designs on a narrative approach in which observed or imagined need results in a satisfying design solution. Castiglioni has shown that while form and function are the main ingredients for successful design, they cannot be the designer's only concerns. His flexibility has allowed him to design a vast array of stylistically varied objects, applying his philosophy and methodology with wit, curiosity, and a combination of exuberance and understatement.

## Words and Expressions

1. collaborate [kə'læbəreit] *vi*. 合作
2. impact ['impækt] *n*. 影响，效果
3. applied [ə'plaid] *adj*. 应用的，实用的
4. polytechnic [ˌpɔli'teknik] *n*. 工艺学校
5. licensed ['laisənst] *adj*. 得到许可的
6. clarity ['klæriti] *n*. 清楚，透明
7. wit [wit] *n*. 智力，才智，智慧
8. evident ['evidənt] *adj*. 明显的，显然的
9. sound [saund] *adj*. 健全的，可靠的，合理的
10. nonetheless [ˌnʌnðə'les] *adv*. 虽然如此，但是
11. acknowledge [ək'nɔlidʒ] *vt*. 承认
12. means [mi:nz] *n*. 手段，方法
13. paradox ['pærədɔks] *n*. 似是而非的论点，自相矛盾的话

14. engender [in'dʒendə] *v.* 造成
15. pivoting ['pivətiŋ] *adj.* 绕轴旋转的
16. garner ['gɑ:nə] *v.* 取得
17. incongruous [in'kɔŋgruəs] *adj.* 不调和的，不适宜的
18. inspiration [ˌinspə'reiʃən] *n.* 灵感
19. induce [in'dju:s] *vt.* 引起，感应
20. pay phone 投币式公用电话
21. consequence ['kɔnsikwəns] *n.* 结果，推论
22. probe [prəub] *vt.* (以探针等)探查，查明
23. declare [di'klɛə] *vt.* 断言，宣称，宣布，宣告
24. interpreter [in'tə:pritə] *n.* 翻译员，讲解员，注释器
25. virtual ['və:tjuəl] *adj.* 虚的，实质的
26. motto ['mɔtəu] *n.* 座右铭，格言
27. reflector [ri'flektə(r)] *n.* 反射体，反射镜
28. assignment [ə'sainmənt] *n.* 任务，(课外)作业
29. fluorescent [fluə'resənt] *adj.* 荧光的，发荧光的
30. tube ['tju:b] *n.* 管，管子
31. purity ['pjuəriti] *n.* 纯净，纯洁，纯度
32. expressionistic [ikˌspreʃə'nistik] *adj.* 表现主义的，有表现派作风的
33. endow [in'dau] *v.* 捐赠，赋予
34. fortuitous [fɔ:'tju(:)itəs] *adj.* 偶然的，幸运的
35. restore [ris'tɔ:] *vt.* 恢复，使回复
36. renaissance [rə'neisəns] *n.* 复兴，复活
37. harmonious [hɑ:'məunjəs] *adj.* 和谐的，协调的
38. boost [bu:st] *v.* 推进
39. embrace [im'breis] *vt.* 拥抱，互相拥抱
40. disposal [dis'pəuzəl] *n.* 处理，处置，支配
41. breakthrough ['breik'θru:] *n.* 突破
42. narrative ['nærətiv] *adj.* 叙述性的
43. ingredient [in'gri:diənt] *n.* 成分，因素
44. exuberance [ig'zju:bərəns] *n.* 繁茂，充沛

## Notes

1. The clarity and wit that characterizes their combined efforts is also evident in Achille's solo production from 1968 to the present day. "他们几兄弟共同设计的作品中所体现出的清晰明智的风格，在阿契利从 1968 年独立从业后至今的作品中仍表现得非常明显。"combined efforts，指他们兄弟几人合作设计的作品。characterize，具有……的特征。

2. In other words, the designer must not take for granted any previous similar object,

must understand the reason for creating a new product or improving an existing one, and must be aware of the available resources. “换句话讲，作为设计师，不可为前人的创造所束缚，要深刻理解自己创新或改良的缘由，并且对现有的物质技术条件要做到心中有数。”take…for granted，认为理所当然。resource，资源、财力，这儿指物质技术条件等。

3. Dadaist：达达派，达达主义(1916-1922 年间兴起的颓废文艺流派)。

4. The Principal Design Component was in this case a new behavior, a consequence of a more probing understanding of an object's combined form and function, which is often the focus of Castiglioni's work. “在这个例子中，其基本设计要素就是某种新型的行为，由此对产品的形式与功能的结合做出更进一步的推断，这往往就是卡思提里奥尼工作中的焦点。”probing understanding，试探性的、推测各种可能性的研究。

5. A street lamp was the springboard for the famous Arco lamp (1962), in which the light source is projected almost eight feet away from the marble base as if it were coming from the ceiling. “著名的 Arco 灯(1962)就是受了一种街灯的启发，其光源设于距离大理石灯座近 8 英尺的地方，看起来灯光好像是从天花板上投射下来的。”注意 as if 引导的虚拟句式。

6. His Ready-made Objects evolve like living things: the components of the Mezzadro stool have been updated as the manufacture of tractor seats has changed without damaging the purity of the object. “他所谓的‘成品的组合’能够像活的生物一般发生进化：如 Mezzadro 凳所采用的部件随着拖拉机座椅的改进而升级换代了，但该作品给人的整体感觉并无改变。”这个句子后半部分的正常语序应该是：as the manufacture of tractor seats has changed, the components of the Mezzadro stool have been updated without damaging the purity of the object.

7. Castiglioni's design approach can best be understood within the context of the cultural climate of which he was a product, and which he in turn helped to shape. 理解卡思提里奥尼的设计历程最好是联系相关的文化氛围，他是这种文化氛围的产物，反过来他又为其形成尽一己之力。

8. In part because Italian culture has always been founded on a tradition of the fine arts and of skillful craftsmanship, and in part because the disruption of World War Ⅱ had created a need for newly designed and produced objects to restore the country's quality of life, Italy was poised for a design renaissance in the 1950s. 20 世纪 50 年代，意大利经历了一场“设计复兴”，部分是由于意大利文化植根于美术和手工艺传统，部分是由于二战造成的破坏使生活质量的提高有赖于新的设计与新的产品。

9. The seemingly disparate sectors of culture, technology, and the economy enjoyed harmonious cooperation toward the common goal of rejuvenation. 看起来并无关联的文化、科技、经济诸因素协调运作以求重现生机。

10. The relatively small size of their family-based companies and their attention to detail

and craftsmanship caused them to take risks and embrace innovative design. “在家庭作坊的基础上建立起来的企业规模较小但工艺精细，这使他们敢于接受那些有风险的新式设计。”

11. These manufacturers put at the designers’ disposal all their technical skill and resources, along with their knowledge of the technological breakthroughs occurring in the postwar period. “这些厂家允许设计师自由支配其工艺技术和相关资源，还有战后在科技方面的突破创新等。” at somebody’s disposal 由某人任意使用。

12. The long-lasting relationships between designers and manufacturers that were established during that time —like those between Zanuso and Brionvega (television manufacturer), between Sottsass and Olivetti (typewriter and computer manufacturer), or between the Castiglionis and Flos (the lighting fixtures company)—were based on shared creative vision and understanding. 在那一时期，设计师和厂商之间建立了持久和密切的联络，例如扎鲁索和布瑞维加(Brionvega，电视生产厂商)、索特萨斯和奥里维蒂(Olivetti，打字机和电脑厂商)、卡思提里奥尼和弗洛斯(Flos，照明设备厂商)等的合作就是建立在相互理解、乐于沟通的基础之上。

## Exercises

Topics for oral discussion.

1. How to comprehend those concepts defined by Achille Castiglioni such as “Principal Design Component”, “Ready-made Objects” and “Redesigned Objects”?

2. What do you think about the long-lasting relationships between designers and manufacturers?

# Lesson 9　Design Makes the Difference

Motorcycles, the objects of my fancy for years, appeal to many emotions, none related to the need for transportation. Much more so than cars, motorcycles reveal mechanical forms and details reminiscent of our early industrial history. Motorcycles also represent a link to the large animal world, which humans had to once rely upon for getting around. Their animal-like scale imbues them with certain animal qualities, like stump pulling power, swiftness or aggression with which their riders identify. [1] The promise of experience and a reflection of self image lies at the core of the emotions that stir a motorcyclist's soul to covetousness.

Buying a motorcycle is an emotional act and appearance plays a very important role in inflating our expectations of experience. What automotive/motorcycle writer Peter Egan calls "garage factor"— the experience, after the thrill of a ride, back in the garage, admiring the shapes, the surfaces, proportions, materials, and mechanical details, the visual experience— continues to provide pleasure at rest. [2]

Italian Ducatis, German BMWs, British BSAs, American Harleys all have "garage factor". They do so because they have either evolved an aesthetic built on years of tradition, or they reflect the vision of a single designer. Most Japanese motorcycles, despite their brilliant engineering and manufacturing quality, lack the requisite allure. As Egan wrote, referring to one of the "best of class" Japanese sport bikes, "once you've stopped, the show is over". [3]

For me, this phenomenon is purely a design problem, one MACHINEART could solve. Selecting a Kawasaki as a base, we set out to design and build the definitive Sport GT, otherwise known as a "Gentleman's Express", a motorcycle appealing to a more sophisticated and experienced enthusiast. Typically at least 30 years old with an income of $40,000-plus, this rider desires the style and "emotional" kick of exotic, high performance machines, as well as the comfort of a wide seat, relaxed riding position, room to carry a small amount of gear, and greater safety. High priced European makers dominate the market, so there is an opportunity for wider market penetration with less costly products.

We set three goals:

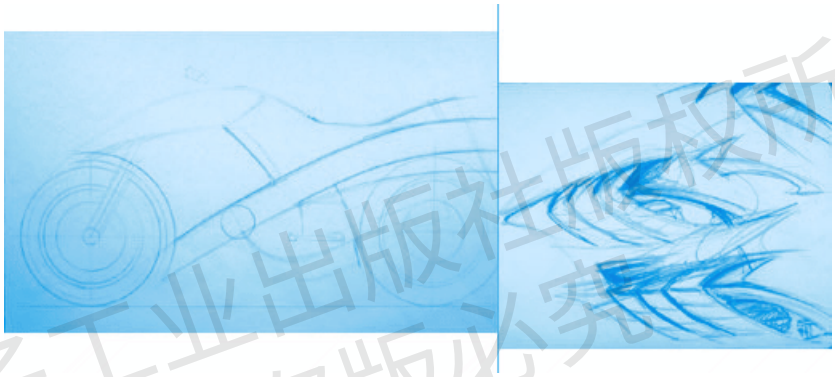
1) Demonstrate that it is possible to design emotion and allure into a mass market

Japanese product by emphasizing the beauty of machinery — the cornerstone of motorcycle enthusiasts' pleasure—while being true to the formal principles of 3-D design.

2) Solve functional and rider comfort problems common in many motorcycles.

3) Propose to Kawasaki a design that would help to raise interest in and increase the sales of its competent.

Defining the basic gesture of the design was fundamental to the success of all that followed. Starting from my first sketch of a rising arc, like a spray of water thrown back by a spinning front wheel, the form evolved true to the intent of implying pent-up energy and the muscular stretch of an animal at speed.[4] My team of three, including designers J rg Schlieffers, a gifted sculptor, and Bruce Scardilli, a magician with plastic and sheet metal, went through the usual process of making a clay model, plaster and rubber molds, fiberglass body parts, stainless steel and aluminum hardware.



While the MK9 did start out as a concept prototype, it was determined that no concessions would be made that would limit the bike to being a design exercise. Unlike most design concepts, the MACHINEART Kawasaki is a fully functional, ridable machine. It had to have rear view mirrors, it had to have turn signals, and they had to look good. Rather than placing the rear view mirrors in their traditional position above the handle bars, the mirrors of the MK9 are low and forward on the same plane as the instrument panel. This not only makes good ergonomic sense by reducing the amount of time it takes for the eyes to focus from one place to another, but provides a rear view past the rider's waist uninterrupted by forearms.[5] The mirror serve double duty by functioning as turn signals, supported by airy stainless steel struts to reduce mass and present a sleeker profile. Rear turn signals combine with the tail lamp in one simple part.

The MK9 design also reduces the time needed to remove body panels for servicing, while locating most fasteners off the exterior for a cleaner appearance. The large side panels and top cap are one piece moldings that are removable with just four bolts each.

The comfortable seat is upholstered in a water, soil, and stain repellent 100% Cordura Nylon for breath ability on hot summer rides. The seat wraps around the gas tank area to keep a rider's knees from damaging painted surfaces and to provide grip as the rider shifts

position in turns.[6] The "metal" fabric color mimics the finish of the unpainted metal parts.

Many parts of the MK9, such as foot pegs and side stand are machined from aluminum or fabricated from stainless steel. The large, oval section of stainless steel exhaust collector shouts "power", while engine castings and aluminum parts are sand blasted and clear coated, rather than painted, to display the beauty of metal. Matte finish natural metal contrasts with the deep, high gloss of the pearl polyurethane paint.

I believe we have proven that a visually exciting, ergonomically successful package can be produced within the parameters of existing engine and chassis tooling and that "high concept" doesn't necessarily mean high price.[7] If mass produced, the MK9 would be projected to sell for below $10,000, competing very favorably with the finest European products.

While the machine certainly has "garage factor", it also has something that only a ride could reveal: the sense that it is more than the sum of its parts. The high timbre throb of its oval exhaust, the sculpting of its glossy yellow orange body, the natural detailing of the metal hardware all combine to give it an exotic character that takes it beyond the common running gear that lies beneath it. It stirs the emotions and provides pleasure. Design made the difference.[8]

## Words and Expressions

1. fancy ['fænsi] *n.* 爱好，迷恋，想象力
2. appeal [ə'pi:l] *vi.* 求助，诉请，要求
3. reveal [ri'vi:l] *vt.* 展现，显示，揭示，暴露
4. imbue [im'bju:] *v.* 浸透
5. aggression [ə'greʃən] *n.* 进攻，侵略
6. covetous ['kʌvitəs] *adj.* 贪婪的，妄想的
7. inflate [in'fleit] *vt.* 使膨胀，使得意
8. proportion [prə'pɔ:ʃən] *n.* 比例，均衡
9. evolve [i'vɔlv] *v.* (使)发展，(使)进展，(使)进化
10. requisite ['rekwizit] *adj.* 需要的，必不可少的，必备的
11. allure [ə'ljuə] *n.* 吸引
12. phenomenon [fi'nɔminən] *n.* 现象
13. sophisticated [sə'fistikeitid] *adj.* 久经世故的
14. enthusiast [in'θju:ziæst] *n.* 热心家，狂热者
15. gear [giə] *n.* 装备
16. dominate ['dɔmineit] *v.* 支配，占优势
17. penetration [peni'treiʃən] *n.* 穿过，渗透，突破
18. demonstrate ['demənstreit] *vt.* 示范，证明，论证
19. mass market 大量市场

20. cornerstone ['kɔ:nəstəun] *n.* 墙角石，基础
21. propose [prə'pəuz] *vt.* 计划，建议，向……提议
22. gesture ['dʒestʃə] *n.* 姿态，手势，表示
23. spin [spin] *v.* 旋转
24. imply [im'plai] *vt.* 暗示，意味
25. pent-up *adj.* 幽闭的，被压抑的
26. fiberglass ['faibəglɑ:s] *n.* 玻璃纤维，玻璃丝
27. aluminum [ə'lju:minəm] *n.* [化]铝
28. concession [kən'seʃən] *n.* 让步
29. rear [riə] *adj.* 后面的，背面的，后方的
30. uninterrupted ['ʌnintə'rʌptid] *adj.* 不停的，连续的，未受干扰的
31. airy ['ɛəri] *adj.* 空中的，轻快的
32. ergonomic [ˌə:gəu'nɔmik] *adj.* 人类工程学的
33. fastener ['fɑ:snə] *n.* 扣件，使系牢之物
34. bolt [bəult] *n.* 门闩，螺钉
35. upholstered [ʌp'həulstəd] *adj.* 经过布置的，(沙发等)装软垫的
36. grip [grip] *n.* 掌握，控制，把手
37. mimic ['mimik] *vt.* 模仿，模拟
38. polyurethane [ˌpɔli'juəriθein] *n.* [化]聚亚安酯
39. chassis ['ʃæsi] *n.* 底盘
40. timbre ['timbə] *n.* 音色，音质
41. throb [θrɔb] *n.* 悸动，脉搏
42. exhaust [ig'zɔ:st] *n.* 排气，排气装置



## Notes

1. Their animal-like scale imbues them with certain animal qualities, like stump pulling power, swiftness or aggression with which their riders identify. “摩托车的规模恰与动物类似，而这正使它们具备某种动物的品性：那沉重的启动力，那行驶中的迅疾，还有动物般的富于侵略性，这都是其驾驭者所认同的。”identify with，认为……一致。

2. What automotive/motorcycle writer Peter Egan calls “garage factor”—the experience, after the thrill of a ride, back in the garage, admiring the shapes, the surfaces, proportions, materials, and mechanical details, the visual experience—continues to provide pleasure at rest. “汽车与摩托车的专栏作家彼得·艾根称之为‘显摆要素’——行驶之余，人们会在摆放坐骑之处细细赏鉴其造型、外表、比例、材料乃至机械部件的细节，这是某种体验，视觉方面的体验——将带来持续的快感。”garage 本义是“车库、汽车间”的意思，这儿根据其摆放车辆的含义，结合上下文，将 garage factor 译为“显摆要素”。

3. Most Japanese motorcycles, despite their brilliant engineering and manufacturing quality,

lack the requisite allure. As Egan wrote, referring to one of the "best of class" Japanese sport bikes, "once you've stopped, the show is over". 而大多数日本产的摩托车,除了机械部件的精良和制造工艺的完善外,缺乏应有的魅力。艾根曾就某种"最佳档次"的日本运动车型评论说:"一旦停止行驶,日本车带给你的快感也就烟消云散。"

4. Starting from my first sketch of a rising arc, like a spray of water thrown back by a spinning front wheel, the form evolved true to the intent of implying pent-up energy and the muscular stretch of an animal at speed. "我的第一张草图首先勾出的轮廓是一个拱起的圆弧,颇似旋转的前轮在水中激起的浪涛,这种形态经演变,喻示着被抑制的能量以及猛兽一跃而起时强健肌肉的张力。" evolve,(使)进展,(使)进化。这儿指草图在初始轮廓的基础上逐渐演变。

5. This not only makes good ergonomic sense by reducing the amount of time it takes for the eyes to focus from one place to another, but provides a rear view past the rider's waist uninterrupted by forearms. 这样一来,不仅从人机学的角度出发,减少了驾驶者的眼睛来回巡视所需的时间,而且它提供的视角是人的腰部后方,不会被前臂挡住。

6. The seat wraps around the gas tank area to keep a rider's knees from damaging painted surfaces and to provide grip as the rider shifts position in turns. "车座环包住油箱以防止驾驶者的膝盖蹭伤油漆层,同时在车座上提时加强紧固性。"keep sb. from doing sth. 阻止某人做某事。

7. I believe we have proven that a visually exciting, ergonomically successful package can be produced within the parameters of existing engine and chassis tooling and that "high concept" doesn't necessarily mean high price. 我认为我们已经证明,在现有的引擎与底座设施的基础上可以进行符合人机学原理且外观绚丽的包装,而且"高品位"不一定意味着高价格。

8. The high timbre throb of its oval exhaust, the sculpting of its glossy yellow orange body, the natural detailing of the metal hardware all combine to give it an exotic character that takes it beyond the common running gear that lies beneath it. It stirs the emotions and provides pleasure. Design made the difference. "那椭圆排气管的高声律动,那如雕塑般的鲜亮的橘黄色车身,那金属部件在细节方面的自然观感,所有这一切综合起来,赋予其某种异国情调,远远超出其所包含的机械部件。它带来激情,带来快乐。而这正是设计的功效。" Design made the difference. 指设计产生的效果较原型有根本的差异,此处意译为"设计带来功效"。

## Exercises

Translate the following passage into Chinese.

Traditional helmet design focuses primarily on aerodynamics and forced convection (cooling air flow through the helmet), since the weight reduction seems to have bottomed-

out with most new helmets ranging from only 6-9 ounces. The aerodynamics are of little concern to mountain bikers (especially to the vast majority who do not race) due to the nature of the sport—a greater percentage of time is spent riding slowly (or even carrying) the bike uphill than during the quick descents. Traditional helmets focus on creating channels for air to move in through the front of the helmet, over the head, and out the posterior. The effectiveness of this depends greatly on a static head position, more characteristic of road biking. The design problem is how to address the different conditions of mountain biking, while making the helmets as protective, lightweight, and cool.