First Impressions: Moholy-Nagy and the Prototype in the Curriculum

"The method is to keep in the work of the grown-up the sincerity of emotion, the truth of observation, the fantasy and the creativeness of the child."[1]

—László Moholy–Nagy

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In 1937, the Association of Arts and Industries invited László Moholy–Nagy to develop and direct a school of design and architecture in Chicago based upon the Bauhaus model of an engaging curriculum that prepares students to participate in the evolving needs of society and industry. While traveling on the ship from London to New York, Moholy–Nagy envisioned a new Bauhaus rooted in the successes of the original. Although leading industrialists lent their names to the prestige of the school, literally dubbed the New Bauhaus, it was the unending struggle to maintain funding that drove the transformation of the basic curriculum of the Bauhaus into an integrated learning model of the School of Design supporting the push to patent and prototype.

The word, prototype, derives from the Greek, πρωτότυπον (*prototypon*), meaning "primitive form," combining the roots, πρῶτος (*protos*), which means "first," and τύπος (*typos*), "impression."[2] Moholy–Nagy's belief in the importance of first impressions is revealed in his meditation on the Bauhaus' *Vorkurs* (Basic Course) over the years turning it into the School of Design's Foundation Course as a model for integrative thinking permeating the entire curriculum and, thereby, creating a lasting impression on both the student and society.

An examination of the changes made to the curricula developed at the Bauhaus, New Bauhaus, and School of Design reveals Moholy–Nagy's interest in the integration of the *Vorkurs* throughout the curriculum as the driving force behind his integrative teaching philosophy. In this paper, I will look at the first impressions that prepared students at the Bauhaus and the School of Design to create innovative prototypes that sustained a lasting impression on society through an evolving curriculum diagram.

BASIC COURSE OF THE BAUHAUS

With the founding of the Bauhaus in 1919, Walter Gropius envisioned a synergy between art and technology heralded by free thinking and material experimentation to face the challenges of the twentieth century.

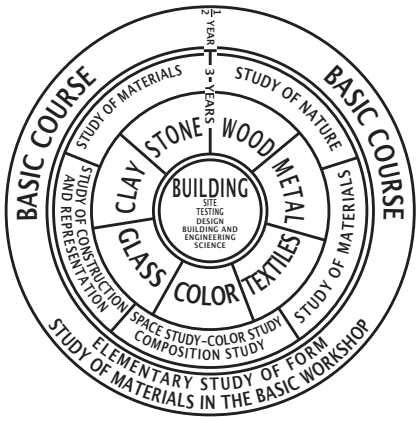

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Figure 1: Walter Gropius, *Bauhaus Curriculum,* 1919 (redrawn by author)

The Bauhaus curriculum was based on the geometry of concentric rings leading from the common *Vorkurs* through various areas of study to specialized Workshops organized by material crafts and centered around Building. Over one semester (1/2 year), the Vorkurs was focused on the "elementary study of form and … materials in the Basic Workshop."[3] However, this curriculum placed less importance on particular subjects and course content shifting instead to focus on the student as an innately talented subject who, if given a stimulating and healing environment, could produce wonders. Under the direction of both Masters, first Johannes Itten and later Moholy-Nagy, the opening of the self as a conscious and subconscious was achieved through sensory experimentation.

In *The New Vision,* Moholy-Nagy described:

> The goal [of the Bauhaus] during this period is still man as a whole. Man––when faced with all the materials and spiritual problems of life––can, if he but works from his biological center, again take his position with instinctive sureness. Then he is not in danger of being intimidated by industry, rush tempo, and external evidences of an often misunderstood "machine culture" or by past philosophies about his creative ways.[4]

Moholy–Nagy succeeded Johannes Itten as the Master for the *Vorkurs* in 1923 until his resignation in solidarity with Walter Gropius in 1928. While both Itten and Moholy–Nagy crafted programs in which the students explored their subjective sensual experiences, each Master interpreted the goals of the course differently. Under Itten's direction, each student attempted to access their spiritual self through rhythmic breathing exercises, meditation, and a controlled diet. However, the work remained in the realm of subjectivity. On the other hand, Moholy–Nagy sought objective understandings achieved through design intuition and developed with sensual experiences leading to prototypes for mass production. With Moholy–Nagy, the studio was a place for experimentation, a research endeavor producing an understanding of the self and material form.

For instance, in one exercise, students began by carving wood into objects that fit the hand considering visual graining, texture, weight, and balance. After many iterations and refinements, a process of discovery, the students used their material intuition gained through these experiments to create new forms for tool handles;[5] in the process, they intuitively yet systematically experimented with statics and dynamics, the visual and tactile, ultimately leading to direct application for a practical use. Rather than placing his end game in the spiritual awakening of the student as Itten had, Moholy–Nagy crafted these first impressions to provide the foundation for a lasting, life-long process of discovery and learning through design.

In this way, sensory explorations emptied the students of their preconceived notions of a tool handle by focusing on the material in the hand. At the point of this emptying, the students created new knowledge through experiment, new understandings through discoveries, and filled themselves with the direct experiences.

The later Workshops were also organized around advanced material explorations: Wood, Metal, Textiles, Color, Glass, Clay, and Stone.

Students in the Metal Workshop also led by Moholy–Nagy created some of the most valuable and enduring designs of the Bauhaus legacy, including the iconic coffee and tea sets by Marianne Brandt (1924) and tea infusers by Josef Knau and Otto Rittweger (1924). After relocating to Dessau in 1925, the Metal Workshop went into full production mode in order to manufacture lighting fixtures for the new buildings. Many of these designs from the Weimar and Dessau periods are still made in reproduction testifying to their lasting impression over these ninety years later.

After Gropius and Moholy–Nagy resigned, the Metal Shop continued to produce the lighting fixtures securing contracts with lamp manufacturers, Schwintzer & Gräff of Berlin and Körting

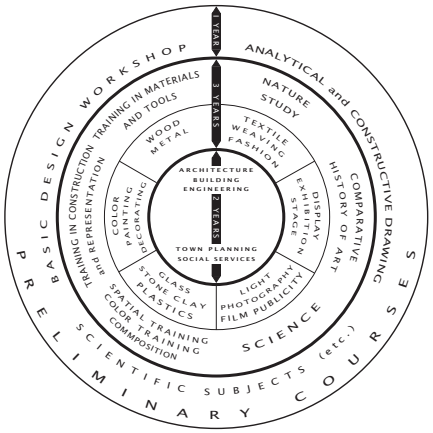
& Mathiesen of Leipzig. As the new director, Hannes Meyer shifted away from the development of artistic intuition through the first impressions made within each student as artist and toward the objective analysis of a design problem supported by increased technical training.

Meyer reorganized the Workshops to meet the immediate needs of industry, which is wholly different than preparing versatile and innovative students to meet the ever evolving needs of society. Therefore, Meyer expanded the Workshops to fulfill contractual arrangements on a cooperative basis. The new educational objectives were organized to educate engineers and artists separately rather than the development of the instinct of "man as a whole."[6]

PRELIMINARY COURSES OF THE NEW BAUHAUS

Although the Bauhaus continued to transform until its closure in 1933, Moholy–Nagy harkened back to the Jacobian pedagogical theories underpinning the original Bauhaus curriculum to develop a curriculum for the New Bauhaus in Chicago in 1937. In the English translation of his *The New Vision*, Moholy-Nagy added sections on the New Bauhaus to the original text. In a section entitled, "The Preliminary Course," he wrote of the course structure and objectives:

> The first two terms are devoted to a preliminary course, obligatory to all students. It gives the fundamentals of shopwork, intellectual integration, physical and life sciences, modeling, drawing, lettering, photography, and music; its objective is spontaneity and inventiveness, to show the student the way to a universal outlook, to make him conscious of his creative power. The method is to keep in the work of the grown-up the sincerity of emotion, the truth of observation, the fantasy and the creativeness of the child. Of course, in the intellectual as well as the emotional development of the youth we have to learn to distinguish and to judge of the innumerable expressions which very often in this state are distorted by an imitation of experiences and notations belonging to another generation.[7]



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While the New Bauhaus existed for only one year, the curriculum that Moholy–Nagy developed reflected his renewal of the original Bauhaus curriculum in both form and principle. Its diagrammatic geometry was also based on concentric circles with the student moving through semesters from the outer ring to the center occupied by Architecture, including Building, Engineering, Town Planning and Social Services. However, he expanded the Basic Course from one semester (1/2 year) to two (one year) with the addition of Analytical and Constructive Drawing and Scientific Subjects.

Completion of the three outer rings of this curriculum qualified the student for a Bachelor degree in four years. If a student continued into the center of the circle, s/he earned a Master degree in architecture in two more years. In addition to the expansion of the Basic Course, Moholy-Nagy also revised the Workshops reducing the seven Bauhaus Workshops to six combining some materials and adding other areas with an emphasis on professional outcomes and new materials. The Clay and Glass Workshops were combined with the addition of Plastics. The Color Workshop included Painting and Decorating. The Wood and Metal Workshops were combined as well. With Weaving and Fashion, the Textile Workshop remained. With this reorganization, Moholy–Nagy added two new Workshops reflecting his personal interests and industry motivations; the Display, Exhibition, and Stage Workshop and the Light, Photography, Film, and Publicity Workshop were added to the roster.

The benefactors and Board of Directors of the New Bauhaus comprised leaders in industry and banking whose intentions were to create a school that supports the commercial needs of industry. However, as a close model of the original curriculum and principles of the Bauhaus, the New Bauhaus remained true to the notion of developing the student first. Moholy–Nagy subscribed to the opinion that, "Everyone is talented" and would flourish, with the proper

Figure 2: László Moholy–Nagy, *New Bauhaus Curriculum*, 1938 (redrawn by author)

experiences, into self–awareness, a type of acquainting oneself with oneself. Moholy–Nagy added an interesting twist to the formula with the introduction of musical training and appreciation as inspiration to the creative self of each student.

In the training of a designer, the process of emptying the self of preconceived notions born of cultural prejudices, inherent in our traditional concepts of everyday objects and buildings, removes the mental obstacles confronting participatory research processes and provides the proper mental attitude toward learning from one's own making. Design research is in this way modeling scientific research in the sense that experiments may lead to unexpected outcomes that produce true innovations; whereas, the deterministic point of view of training in a traditional design school stunts the creative process and rarely supports innovation over reiteration of past successes.

This ability to empty oneself in order to learn through awareness, a process known as kenosis, is key to the creation of the first impression that elicits a lasting change in the person. It is this profound change in the person that produces the ability to create new knowledge and innovative design research resulting in unique and market–viable prototypes. As the student eschews the assumptions of how a teapot, a lamp, or a housing unit should look and function, s/he is open to challenging established forms and ways of living.

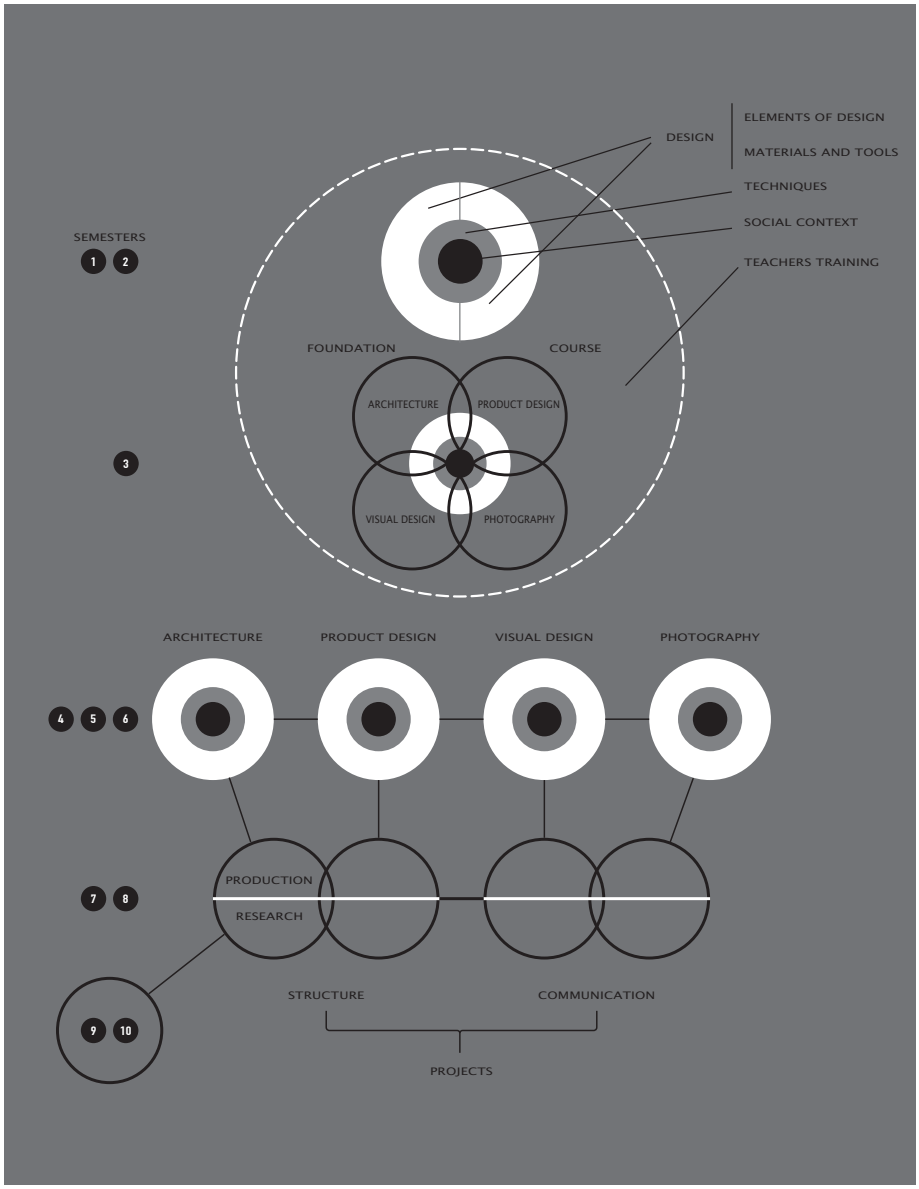
FOUNDATION COURSE OF THE SCHOOL OF DESIGN

Due to a minor Stock Market crash and other financial factors, the Association of Arts and Industries wavered in their commitment to the school. In a moment of desperation and dedication, Moholy–Nagy offered his salary to temporarily cover operating costs, and he scrambled to find alternative funding among rich industrialists and manufacturing companies across the United States. Although he secured many donations of equipment and materials, he was unable to secure the funds necessary to cover operating costs, including faculty and staff salaries. Without informing him in advance, the Association announced to the student body that the School would not reopen in the fall of 1938.

In solidarity, Moholy–Nagy and his wife, Sibyl, opened their house to the unemployed faculty. Undeterred, Moholy–Nagy set about continuing with a school of design with money from his own savings $2,500. Some of the original faculty agreed to work for one year for free, maintaining other academic or industry positions in addition to their teaching responsibilities. This gesture was a testament to the belief in the vision of Bauhaus education and its lasting impression. Prior to the advertising campaign targeting prospective students, Moholy–Nagy also garnered prestigious supporters from academia and industry including John Dewey, Walter Gropius, Joseph Hudnut, Julian Huxley, W. W. Norton, William Bacharach, and Alfred H. Barr, Jr. On 22 February 1939, eighteen day students and twenty-eight night students began classes at the School of Design.

The School of Design was later renamed the Institute of Design and became accredited (1944). In 1946, Spring Semester enrollment spiked with returning soldiers at the end of American involvement in World War II. One year later, enrollment reached 1000 students! Unfortunately, Moholy–Nagy passed away in November of 1946 ending his battle with leukemia, but not before making his impression on the way that beginning design is taught.

The final iteration of his teaching and learning model re-invented for the School of Design truly deepened and expanded the geometry of the concentric rings. The curriculum diagram for the School of Design was no longer the simple concentric geometry with the student moving toward the center and with Building or Architecture Workshops occupying that center. At first glance, it was now designed using the format based on a linear model of time with the student moving from the top to the bottom. However, if one looks more closely, or rather if one squints at the page and looks less closely, six concentric geometries pop off of the page.



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These circles have an outer white ring, a middle gray ring, and a black center circle against a gray field. After this first impression, one cannot ignore the boldness of this graphic, resembling six gray eyeballs.

These circles are labelled as Design including Elements of Design with Materials and Tools (white outer ring), Techniques (gray middle ring), and Social Context (black center). The first and largest of these circles was centered along an invisible horizontal line with two black circles with a one and two representing the first and second semesters. Another, smaller eyeball is in line with the third semester and intersected by four circles of a black outline containing the names of the four Workshops: Architecture, Product Design, Visual Design, and Photography. These two figures, eyeballs and circles, are encompassed by another large circle with a dashed white outline described as Teachers Training.

The fourth, fifth and sixth semesters have four eyeballs each labeled by a Workshop title, linked together by a horizontal black line, and also linked to outlines of these circles below. Positioned at the seventh and eighth semesters, the outlines are bifurcated with an alternating white/black horizontal line with Production above the line and Research below. These

Figure 3: László Moholy–Nagy, *School of Design and Institute of Design Curriculum*, 1948 (redrawn by author)

outlines were also grouped more closely and into pairs: Architecture overlaps Product Design and Visual Design overlaps Photography. Underneath the Architecture and Product Design Workshops is the word Structure, while under the Visual Design and Photography Workshops is Communication, which are both coming together into Projects.

Lastly, the Architecture Workshop was linked to another circle with a black outline surrounding the ninth and tenth semesters also aligned with the tree shape diagram of Structure, Communication, and Projects.

If, in the previous Bauhaus and New Bauhaus curriculum diagrams, the student moved from the outside to the inside passing through and along the concentric rings, and, in the new diagram, the student of the School of Design moved around and within the eyeball representing the foundation of the Foundation Course as well as every Workshop. The eyeball of Design, Techniques, and Social Context represented the kernel that was pressed into each student who then carried this kernel of new understanding into the remainder of the curriculum and presumably into their life work.

In *Vision in Motion*, Moholy–Nagy described his curriculum concept and pedagogical policy as such:

> The first year Basic Course is the backbone of the educational program. It radiates its principles far into the curriculum of the later specialized vocational fields, design and architecture. The Basic Course consists of three great chapters of information and experimental work in constant correlation: Technology… Art… Science… Through these integrated studies the student is given assistance in developing latent aptitudes, so that his eventual decision and choice of specialization is based upon his own educational experience. "Specialization" means the choice of a workshop, not a vocational goal.[8]

> The policy is, first, not to dominate the student; second, to provide him with the opportunity to become conscious of the world and himself through exercises which simultaneously train the intellectual and emotional spheres. The exercises are generally of such nature that he cannot look for solutions in books or in museums. Because these exercises have no direct counterpart in tradition but are built around his potentialities and tools and materials, they direct his vision to new and unexplored channels. The student must use his imagination and wit, he must debate and contemplate, he must make independent findings. Since he is not allowed to imitate past solutions, he soon finds the power to face new situations fearlessly, to develop new habits of imagination. This relieves him of the necessity of identifying or even comparing his work with past performances. This policy is a powerful incentive for the teacher too, as it lessens the danger of clinging to traditional fixations or to academic certitudes.[9]

According to Sibyl Moholy-Nagy, one of Moholy–Nagy's endearing gestures that he used to explain himself was to interlace his fingers, meaning, among many things, integration, a bringing together.[10] At the School of Design, the eyeball forms one moment of integration among Design, Techniques, and Social Context, which is subsequently re-integrated in each phase of the curriculum deepening the first impression and constructing a lasting impression in the student.

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Figure 4: Author, demonstrating gesture that Moholy–Nagy used to describe integrative thinking

The School of Design led to many innovative prototypes such as the Skeeter, a motorized scooter, by Louis Richards, a horizontal elevator for mass transit by George Luedeke, and wooden springs by various students. Moholy-Nagy also worked for the mayor of Chicago on camouflage techniques for the entire city during World War II, and György Kepes conducted a Workshop to explore these ideas with students.

The School of Design also trained teachers, prototypes as well, who were interested in

understanding and implementing the pedagogical techniques and the curriculum of Moholy–Nagy. These teachers promulgated their impressions across the country with untold numbers of students.

In 1949, the Institute of Design merged with the Armour Institute to form Illinois Institute of Technology (IIT). In 1955, Ludwig Mies van der Rohe successfully lobbied for the dissolution of the Institute of Design's stand alone architecture program due to competition and confusion of ideologies between it and Mies' program.

LASTING IMPRESSION IN THE FIRST IMPRESSION

Throughout his academic career, Moholy–Nagy continuously developed his pedagogical ideas re-examining and refining the Bauhaus curriculum. While the prototypes, as "first impressions," produced by Bauhaus, New Bauhaus, and School of Design students ultimately produced a lasting impression on modern design and architecture, Moholy–Nagy tinkered with sustaining, throughout the curriculum, the first impressions of self–discovery made on and by each student through his integrative curriculum model.

ENDNOTES

1. László Moholy-Nagy, *The New Vision: Fundamentals of Bauhaus Design, Painting, Sculpture, and Architecture with Abstract of an Artist*, (Mineola, NY: Dover Publications, 1938), 20–21.
2. Harper, Douglas, "prototype (n.)," *Online Etymology Dictionary*, accessed September 15, 2015, http://etymonline.com/index.php?term=prototype&allowed_in_frame=0.
3. Text from partial English translation of Bauhaus curriculum diagram.
4. László Moholy-Nagy, *The New Vision: Fundamentals of Bauhaus Design, Painting, Sculpture, and Architecture with Abstract of an Artist*, (Mineola, NY: Dover Publications, 1938), 18.
5. László Moholy-Nagy, "New Approach to Fundamentals of Design," *More Business,* v. 3, n. 11, (Chicago: American Photo–Engravers Association, November 1938), 4–6.
6. László Moholy-Nagy, *The New Vision: Fundamentals of Bauhaus Design, Painting, Sculpture, and Architecture with Abstract of an Artist*, (Mineola, NY: Dover Publications, 1938), 18.
7. Ibid., 20–21.
8. László Moholy-Nagy, *Vision in Motion,* (Chicago: Paul Theobald, 1947), 64–65.
9. Ibid., 65.
10. Sibyl Moholy–Nagy, *Experiment in Totality,* (Cambridge, MA: The MIT Press,), 60.