

TRUTH AND BEAUTY
at the
INSTITUTE FOR ADVANCED STUDY

Irving Lavin and Marilyn Aronberg Lavin



On the cover:

IAS Medal dedicated to Louis Bamberger, obverse and reverse, 1934

Photograph by Bruce M. White

TRUTH AND BEAUTY at the INSTITUTE FOR ADVANCED STUDY

Contents

3	Introduction
4	Creating an Image of the Institute: Seal, Medal, Bookplate <i>Marilyn Aronberg Lavin</i>
14	Truth and Beauty at the Institute for Advanced Study <i>Irving Lavin</i>
30	Appendix A: Images related to motifs on the medal <i>(Marilyn Aronberg Lavin)</i>
35	Appendix B: Documents cited in the text
48	Notes
58	List of Illustrations
61	Bibliography



Fig. 1 IAS Medal, obverse

Introduction

Almost as soon as I arrived at the Institute in 1974 and saw the official seal, I was intrigued by the poetic beauty and formal simplicity of this eminently pictorial image, quite unlike the abstract epigraphic tradition of academic heraldry. In a circular format, the quiet, elegant, and classical Art Deco composition depicts two graceful young women, one nude and one clothed, standing on opposite sides of a leafy tree that bears abundant fruit (Fig. 1). Their poses are complementary, one looking out toward the spectator, the other looking down, avoiding eye contact. The figures are named in large letters sans serif, TRUTH to the left, BEAUTY on the right. Truth holds a mirror that overlaps the circular frame to reflect reality. On the exergue, at the bottom of the circle, in smaller letters, is the artist's signature, P. TURIN. What struck me most was the extraordinary intellectual acumen that underlay the evident allusion, in both the conceit and the design of the emblem—conveying the essence of the mission of the Institute for Advanced Study—to the famous final couplet of John Keats's "Ode on a Grecian Urn." With a mind to study the genesis and significance of this remarkable image, I subsequently spoke with Harry Woolf, the Director at the time, who gave me access to a file of letters and other documents pertaining to the seal, which I carefully stashed away. They languished for more than thirty years thereafter as other projects intervened, until it became, now or never.

To assure completion of the endeavor, I asked my wife and closest colleague to undertake the task of tracing the facts of the commission, how it was conceived, and how it was carried out. For some of the research, we worked together in the new Shelby White and Leon Levy Archives Center of the Institute, the archives of the Library of Congress, the Archives of American Art, and the archive of the Rockefeller Foundation in Sleepy Hollow, New York.¹ We also scoured the rich fund of published autobiographies, biographies, and commentaries that deal with the founding of the Institute. What we discovered was a rare and quite complete view of the creation of a unique work of art recorded by the accident of a trans-Atlantic correspondence between friends.

In its final form, the study is divided into separately written parts: Marilyn Aronberg Lavin begins with the history of the project to invent and bring into physical form what remains the official seal of the IAS.² My analysis then follows, setting the imagery of the seal and its meaning into the context of the ideas that brought the Institute into being. An appendix includes A) illustrations of some of the art historical precedents for the various elements represented in the seal's composition, and B) copies of the documents referred to in the text. It is our joint hope that, to some extent, this perhaps excessively academic study expresses the gratitude we both feel for the precious gifts we have received over the years from this wondrous place.

Irving Lavin
March 25, 2011

Creating an Image of the Institute: Seal, Medal, Bookplate

Marilyn Aronberg Lavin

At the end of 1929, two years after he had delivered his three controversial Rhodes Trust Memorial Lectures at Oxford University criticizing the sorry state of education in English, German, and American universities, Abraham Flexner (Fig. 2) was approached by two agents of the Bamberger family (Fig. 3 and Fig. 4) who wished to find “uses to which a considerable sum of money might be placed.”³ Flexner said immediately that his competency was limited to the educational field and

that in this field it seemed to me that the time was ripe for the creation in America of an institute in the field of general scholarship and science, resembling the Rockefeller Institute in the field of medicine—developed by my brother Simon—not a graduate school, training men in the known and to some extent in methods of research, but an institute where everyone—faculty and members—took for granted what was known and published, and in their individual ways endeavored to advance the frontiers of knowledge.⁴

After two months of reflection on a plan drafted by Flexner, Louis Bamberger and his sister Carrie (Mrs. Felix Fuld) announced that they were resolved to endow such an institute with the condition that Flexner, who considered himself retired, would undertake the organization.⁵ Flexner responded that for such a decision, he had to consult with his wife, Anne Crawford Flexner (Fig. 5). He describes her reaction to the Bamberger offer thus:

Quick as a shot she rejoined, “You will have to do it. You have spent your life criticizing other people. You can’t refuse to give them a chance to criticize you.”

Thus he accepted the position.⁶



Fig. 2 Abraham Flexner
(1866–1959)



Fig. 3 Louis Bamberger
(1855–1944)



Fig. 4 Caroline (Carrie)
Bamberger Fuld
(1864–1944)

One of the first things he turned his attention to, even before the preliminary financial and practical arrangements were in place, was the need to represent the Institute graphically with an official seal (Appendix B. 1.). He writes:

The new Institute for Advanced Study has got to have a seal, and I have been asked to procure a sketch—something very simple and characteristic. The notes that I would like struck are Truth and Beauty—not Truth alone, for I agree with you that both are elements in a national culture. I should also like English, not Latin or Greek used. Could you make a little sketch which would convey this idea?⁷

Flexner was calling for help with the seal's design from his good friend William Welles Bosworth (Fig. 6), a prominent American architect with a long list of important buildings to his credit.⁸ Bosworth had been working for John D. Rockefeller Jr. (Fig. 7) for a number of years when, in 1924, the latter set up the "French Fund" for the restoration and rehabilitation of major buildings in France after World War I. At Rockefeller's behest, Bosworth then moved his office to Paris (198 Avenue Victor Hugo) with the assignment to restore nothing less than the Palaces of Versailles and Fontainebleau, and the Cathedral of Reims damaged in the war. Rockefeller also had commissioned Bosworth to design a new national museum in Cairo, where, working with Professor James H. Breasted, they tried to initiate the project with the Egyptian government but did not succeed. Flexner, on what he called "his first vacation," met Bosworth when he and Anne visited Cairo in 1925.⁹ Five years later, Flexner's letter soliciting Bosworth's help seems to carry on discussions concerning truth and beauty the two men might have been having, including during Flexner's extended visit to Paris in 1928.¹⁰ In any case, Bosworth, who was also a more-than-competent artist, responded with enthusiasm:

I was delighted to have you call on me about the seal, and I would even go so far as to suggest that ... after we have agreed on a design—the thing should be modeled and cut by a great artist over here named Turin. I was present the other day, when the Historiques Monuments Commission (*Commission des Monuments Historiques* of France) presented its medal to Mr. Rockefeller, and I was much impressed by the strength and beauty of the medal. It was modeled by Turin—who is very well known, of course!



Fig. 5 Anne Crawford Flexner (1874–1955)



Fig. 6 W. W. Bosworth (1868–1966)



Fig. 7 John D. Rockefeller Jr. (1874–1960)



Fig. 8 Pierre Turin, Rockefeller Medal, reverse and obverse, 1929



Fig. 9 Angel of the Annunciation, Reims Cathedral

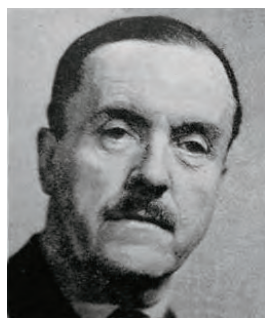


Fig. 10 Pierre Turin (1891–1968)

I wish you would ask Mr. Rockefeller to show you his medal (Fig. 8). I shall send you some ideas shortly for your seal. Surely, 'Truth and Beauty' is the highest ideal that any of us, can hold—it shows what splendid a work you are conducting, that you can have it appropriately for your motto!"¹¹

(Parenthetically, the beautifully preserved gilt-bronze medal, which is housed in the Rockefeller archive, shows a curly headed, sweetly smiling angel on the obverse, and the figure of a medieval architect working at his desk with a compass and right-angle ruler, and a dedicatory inscription to John D. Rockefeller Jr. on the reverse. The angel face is a modern version of the famous smiling Angel of the Annunciation on the façade of Reims Cathedral (Fig. 9), broken off and damaged during World War I.)¹²

The artist Pierre Turin (Fig. 10) was indeed "very well known." Born in 1891 in Sucy-en-Brie, a suburb of Paris, he attended the École des Beaux-Arts. There he studied with the Art Nouveau sculptors, Frédéric-Charles-Victor de Vernon (1858–1912), and Jules-Félix Coutan (1848–1939, who did huge sculptures for Grand Central Station in New York). From 1911, Turin exhibited at the Salon des Artistes Français, and later also at the Paris Mint (Monnaie de Paris). In 1920, he won the Grand Prix de Rome, and he spent several years in Rome at the Villa Medici. He received the gold medal from the Société des Artistes Français in 1925. He was much admired for his ability to cut his designs directly in steel and was perhaps best known for the signature medal (Fig. 11) of the *Exposition Internationale des Arts Décoratifs et Industriels Modernes* held in Paris in 1925, where the term "Art Deco" was coined.¹³ The visual vocabulary of this style returned to certain classical motifs and poses, abstracting the



Fig. 11 Pierre Turin, Exhibition Medal, 1925

individual forms into geometric shapes, themselves often exaggerated into sharp angles. The character is modish in the extreme, and the effects are frequently gained through elegant linear stylization and decorative patterning. Turin's personal version is more fulsome than the description just given, adding to it more than a measure of human warmth and even humor.¹⁴

In less than a month, Bosworth wrote to Flexner saying he had talked to Turin, who immediately showed interest in the commission. The exchange between Bosworth and Flexner at this point is so crucial to this story that I reproduce the letter in its entirety (Appendix B. 2.).¹⁵ Bosworth says:

... having had an interesting interview with Monsieur Turin ... I found that he agreed with me that to make a good-looking Seal, we ought to have *three* things instead of two. In other words, the Tree of Knowledge growing out of Truth and Beauty. (hand-written in) as the third, uniting the two" ... "I am hoping that you will agree that the fruit of pursuing "Truth and Beauty," in your Institution, is "Knowledge," and that the force of the "Truth and Beauty" idea is rather strengthened than weakened, by letting it figure as a fruit-bearing tree, beside which they stand.

With these words, Bosworth already describes the ultimate composition: figures of Truth and Beauty on either side of a Tree whose fruit is the result of their combined pursuits. I emphasize that Bosworth continues:

it merely becomes a matter of who can make the most masterful design!

And to be fair, he suggests opening a competition by including two other medalists to consider. These artists are Paul-Marcel Dammann (1885–1939; whose name he spells incorrectly as Damman, see Fig. 12), and Percy Metcalfe (1895–1970, see Fig. 13), sculptor of the new coinage of the Irish Free State. Of course he is joking when he speaks of the great expense this expanded competition will entail, but probably not when he speaks of receiving one of the medals that will result. It is important to note his shift from "seal" to "medal" and his suggestions as to the various uses to which the motif could be put.

By mid-January, 1931, Flexner had spoken to the trustees and was authorized to proceed with a three-way competition.



Fig. 12 Paul-Marcel Dammann, bronze medal, ca. 1930



Fig. 13 Percy Metcalfe, coin, obverse, 1924



Fig. 14 Shields of Harvard, Yale, and Princeton

The trustees, he says, were delighted with the idea of the medal being given at long intervals to persons of distinction. His own feeling is that such a practice "will get away from the bestowing of honorary degrees, which has become such a nuisance in this country."¹⁶ The Board voted an appropriation not to exceed \$500 for the project, and authorized Bosworth to ask all three artists (Turin, Dammann, and Metcalfe), to submit designs.¹⁷ It is clear that, upon seeing their "idea(s) and composition(s)," Bosworth found Turin's work far superior to the others; "conclusive" is the word he uses. In fact, he thought it unnecessary to go back to the other artists for further drawings, since, as he says, "it would make no difference," and not doing so would save the expense. He found Turin's drawings so satisfactory that he sent them to Flexner by registered mail, continuing:

In asking Turin to make larger drawings, I told him—as you said I might—that both you and I were in favor of his design and that we had little doubt the Committee in New York would agree with us. I therefore suggest that you now show all the sketches to your Committee and ask for a final decision.

Of course, as soon as Turin begins to work on the model, he will still further purify and beautify the thing. A drawing is never a good representation of a model until it is drawn from the model itself. So far as I am concerned, I feel thoroughly satisfied that Turin will give us what we want.¹⁸

Flexner's response upon receiving the large-scale sketches was characteristic:

I myself am delighted with Turin's work ... They (the drawings) are not only beautiful in themselves, but they avoid what I think we in America ought to avoid, namely recurrence to the mediaeval forms which have no more business in America than a Gothic library. Every college seal that I have seen is a fake coat of arms (Fig.14). That is all very well in Oxford and Cambridge and Paris, but we ought to plant our foot firmly upon the here and the now and utilize our freedom to devise new forms of beauty which shall be expressive of our efforts. That I think Turin has done, and that I hope we shall accomplish later when it comes to building, site, etc.¹⁹

As expected, Turin's design was ratified by the trustees (October 14, 1931) with only one change requested. On the advice of lawyers, the inscription, which had been "ESTABLISHED 1930," would be substituted with "FOUNDED 1930," since that described more precisely what had taken place. Flexner then asks that Turin execute the seal. At the same time, Flexner decides to retain the (larger size) drawings, "so that a medal can be executed when the occasion for an awarding arises."²⁰ Bosworth draws up the final arrangements with Turin in a memorandum, dated November 13, 1931. The understanding includes:

- 1) Proceed to execute the seal (Fig. 15).
- 2) Proceed with the "necessary models" for the medal, and when finished, send proofs stamped on paper for final approval. Promised for February 1932.
- 3) Turin proposes 4 cm in diameter for the seal; suggests that it be used in the center of the letterheads at the top of the sheet, with the printed title, the Institute for Advanced Study, with address, etc., below, and the lists of names of officers and trustees at each side. Bosworth remarks: "It will have grace and dignity."
- 4) Proceed to make plaster models for both sides (obverse and reverse) of the medal, which should be about 30 cm in diameter, to be kept (in the Paris Mint) until time to cast the medal since no one but Turin could properly execute the final medal (which would take about two months to do).
- 5) A second set of plaster models could be sent to Princeton for display.²¹
- 6) 10,000 frs. for the seal; five now, and five when complete.
- 7) 12,000 frs. now for plaster models; when the medal is ordered, another 3,000 frs. to supervise final tooling of matrix of medal, to be done at the Paris Mint.
- 8) Bosworth is to retain custody of the studies, "handing (back to Turin) only the approved design for the seal."

On December 4, 1931, Flexner accepts the arrangement and has the checks drawn up, saying full authorization for making a model will come at the trustees meeting on January 13, 1932.²²

The seal was to be finished by March 8 and paper proofs were being prepared. Turin suggests that an order be given to a Parisian printer who "does a great deal of work for America." Bosworth concurs, saying that Flexner (who was planning a trip to Paris in May–June) could then take the plates home in his trunk.²³ A few days later, Bosworth receives printed proofs of the seal, and states:

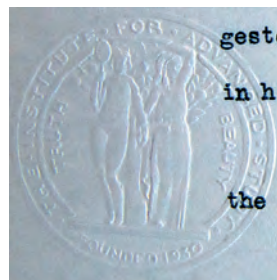


Fig. 15 IAS seal, embossed imprint on the Minutes of the Board of Trustees, Oct. 13, 1931



Fig. 16 Pierre Turin,
Bookplate of the IAS, 1932

Turin has produced a lovely thing. I feel sure that there is no one living today who can treat the theme of Truth and Beauty any more effectively than that.

You will see that it is possible to get a cameo-like effect by putting a little color on the seal. This is very inexpensively done by the printers here in Paris. You will also see what a variety of effects can be had by printing with the metals. He [Turin] thought you might like to use different types of seals for different purposes.²⁴

Bosworth draws up an adjusted Memorandum of Understanding between Flexner and Turin (undated, but sometime between mid-March and June, 1932).

1) Dr. Flexner approves the bookplate (Fig. 16) and selects the one with the palest coloring. They are to be gummed all around.

2) The steel plates are to be left at the printers, Chevalier, 7 rue de Bomboust (Paris).

3) Turin is to try for a reduction in price; 10,000 pages to be printed and shipped via American Express to Flexner, 100 East 42nd Street, New York (current office of IAS).

4) Turin submits plaster cast of the medal and asks for permission to have bronze castings made separately of obverse and reverse at the Mint, mounted in wood frames (costing ca. 300 to 400 frs. each) and then sent to Flexner in NYC, the dies to remain at the Monnaie, subject to Flexner's orders.

5) Turin is authorized to order four copies of the medal in bronze, one for Bosworth and the other three to be sent to Flexner, about September 15.

6) Flexner agrees to increase Turin's payment for designing the medal from 12,000 to 15,000 frs.²⁵

All is agreed; Flexner gains a positive vote from the trustees, but decides not to pay Turin until he has seen and is satisfied with the results. The printing firm Chevalier sends a bill for 7,000 frs. (Nov. 10, 1932), "for making and sending the book plates."

Several months later, while awaiting arrival of the large order of stationery and bookplates, an unexpected and truly annoying problem arose. Flexner writes:

The sample sheets of the letter heads from Chevalier are

inexpressibly beautiful, and I am grateful to you for having steered me into his hands. We are having no end of difficulty in reference to the book plates, a difficulty which will be repeated should we undertake to have the letter heads made in France. Every book plate has got to bear upon its face—ditto every sheet of letter paper—MADE IN FRANCE. This would of course completely ruin Turin's design. I am endeavoring to have the rule waived by the customs officials in reference to the 10,000 book plates which have arrived, but I don't know whether I shall be able to do it. So much for our wonderful Hawley-Smoot tariff!²⁶

The problem was only resolved when Bosworth, after consulting with the printer, sent the following cable on December 15, 1932:

CHEVALIER SAYS CONSUL HERE INSTRUCTED HIM
NEED TO PRINT MADE IN FRANCE ON OUTSIDE OF
PACKAGES SINCE THINGS WERE NOT FOR RESALE
WHICH HE DID DO YOU WANT HIS AFFIDAVIT HE
NEEDS CASH SHALL I PAY HIM.
BOSWORTH ²⁷

The samples were released and sent to Flexner who heard from the U.S. Customs official that this occasion was an exception and would not occur a second time.²⁸ Because of this experience, Flexner and the Board postponed having the letterhead stationery printed "until there was a new administration." (Herbert Hoover would serve for another year.) They also realized that whenever they had the medal made in Paris (where the workmanship was better than in the United States) the objects would have to be "hand-carried." Both the printer and the artist acknowledged their payments.

In fact, by the end of the year, Turin finished the medal and made it known that he had placed the matrices in the Paris Mint, filed under Flexner's name. Upon receiving this news, Esther S. Bailey, Flexner's secretary, conveyed to Bosworth his order to change the collocation at the Mint to the "Director or the authorities of the Institute for Advanced Study, so that as the years go by there will be no difficulty in obtaining access to them."²⁹ A few days later, Flexner had the medal in his hand and said: "The medal and the bookplates are just as lovely as the seal and are universally admired."³⁰



Fig. 17 Joseph Severn,
Portrait of Keats, 1816



Fig. 18 Joseph Severn,
self-portrait

Although no discussion of the reverse of the medal appears in the correspondence, the design carries forward the ideas Turin expressed on the obverse. The circle is divided into three horizontal zones: a shelf, an inscription, and a placard. Resting on the shelf, Knowledge accrued from combining Truth and Beauty appears in the traditional form of a burning lamp along with four books, one of which is propped open. Below the inscribed name of the Institute is a supported placard intended for a dedicatory inscription. It stands before symmetrically branching boughs of laurel, the immortal symbol of fame and glory.³¹

More than a year later, with much water under the bridge, Flexner asked Bosworth to order the medal cast in gold in two copies as gifts to the Bambergers, one for each.³² There was a question as to whether they needed special permission to import so much gold as would be involved. Flexner had the Institute's lawyer look into it and was told the following: there was absolutely no problem about bringing *in* gold; he could bring in as much as he liked. It would be impossible, however, to take gold out! To which Flexner quipped: "(This rule) looks rather ridiculous, in as much as we have the biggest stock of gold in the world."³³ It was decided that Bosworth would hold the medals once they were complete, awaiting Flexner's arrival in Paris, and the Director would bring the medals home in his luggage.³⁴

The extraordinary motto Truth and Beauty borrowed from Keats's "Ode on a Grecian Urn," apart from its appropriateness for the idea of the Institute (which Flexner called his "dream"), had great personal significance for Flexner and his wife Anne. In his introduction to the 1960 edition of Flexner's autobiography, his close friend Allan Nevins (1890–1971), American historian and journalist, reports that Abraham loved to recite this poem at private social gatherings, which he did, of course, from memory.³⁵ Mrs. Flexner, Anne Crawford Flexner, who was a quite successful Broadway playwright (*Mrs. Wiggs of the Cabbage Patch* was her greatest success), in this period did a great deal of research on Keats and then wrote and produced the play *Aged 26: A Play about John Keats*. The drama portrays the poet's last days in London before leaving for Rome in 1819 where he was soon to die. In a passage in Act II, Scene 1, when Keats (Fig. 17) is preparing for his trip to Rome, his friend, the painter Joseph Severn (1793–1879; Fig. 18), enters and says:

Severn: Miss Brawne {loved by Keats} saw me from their house and told me not to ring. It's amazing, her resemblance to the Titian! [Sits on foot of settee.]

Brown: {Keats's mentor} *What Titian?*

Severn: The draped figure in his 'Sacred and Profane Love.' We'll see it, you know! In the Borghese Palace!

Keats: I don't think I could bear to see it.³⁶

This famous painting (see Fig. 30) is a conspicuous precedent for showing two stunning female figures, one nude and one draped, in symmetrical juxtaposition. Turin surely knew it, for his time in Rome was spent at the French Academy, literally walking distance from the Villa Borghese, where the painting has resided since 1608.³⁷

The history of the Institute seal is somewhat obscure during the next twenty-five years. But in 1978, Harry Woolf, Director of the Institute, 1976–87, brought about something of a revival. His first move was to send John Hunt, the Assistant Director, to Paris to track down the original molds. Hunt found them in the Mint, just where they should have been. They then ordered a number of copies cast in bronze, and had them shipped to Princeton, to be given out on special occasions; an exemplar (Fig. 19) is engraved to honor the Einstein Centennial in 1979. Despite changes in style and social values, the image has upheld its symbolic position through the years of the Institute's growth and change. In fact, it becomes ever more present on paraphernalia periodically on sale to the Institute community in the dining hall. Knowing how Flexner felt about the exalted dignity and exclusivity of the seal and its meaning, one wonders what he might have made of these latter-day developments.



Fig. 19 Bronze IAS Medal, reverse. Engraved Einstein Centennial 1879–1979

Truth and Beauty at the Institute for Advanced Study

Irving Lavin

When Abraham Flexner requested from his friend, the architect William Welles Bosworth, a design for a seal and commemorative medal for his new Institute for Advanced Study, he was quite knowingly and pointedly breaking with long-established tradition.³⁸ The few but precise specifications he provided gave emblematic expression to Flexner's radically innovative ideas about what he constantly referred to as a "modern" academic pursuit of "new" knowledge. Flexner's letter of November 7, 1930, begins:

The new Institute for Advanced Study has got to have a seal, and I have been asked to procure a sketch—something very simple and characteristic. The notes that I would like struck are Truth and Beauty—not Truth alone, for I agree with you that both are elements in a national culture. I should also like English, not Latin or Greek used. Could you make a little sketch which would convey this idea? Don't bother if it doesn't interest you (Appendix B. 1.).

Although he referred to the Institute's emblem as a seal, the inscribed text was not to be in Latin or Hebrew or Greek, as was customary with academic insignia, but in English—the focus therefore being on contemporary clarity and ready comprehensibility, rather than recondite, even arcane learning (as it turned out, even the letter forms were in "modern" sans serif, distinctly Art Deco style). The motto was to be both Truth and Beauty, not, as he agreed with Bosworth, Truth alone, the common attribute of university heraldry. Invoking "a national culture," Flexner was expanding his intellectual compass to the broadest possible coherent reach.

Keats

And the motto was adapted from what were perhaps the simplest, most famous, and universally beloved lines of poetry in the English language, the last two verses of John Keats's "Ode on a Grecian Urn":

"Beauty is truth, truth beauty,"—that is all
Ye know on earth, and all ye need to know.

Besides being the most famous lines of English poetry, the final distich has also been called the most controversial; the literature on them is endless, and the debate continues to this day.³⁹ In fact, Keats committed two related, unpardonable errors, for which many explanations have been offered, ranging from fuzzy logic to fatigue from the onset of his mortal illness. (Keats wrote the poem in May 1819, fell fatally ill with tuberculosis on February 3, 1820, and died in Rome on February 23, 1821.) The first line, to begin with, is a glaring tautology: "if Truth and Beauty are the same," it has been asked, "why have two words?" The second verse seems equally imponder-

able: who can believe that the identity of Truth and Beauty is really all we know and need to know on earth? T. S. Eliot (who was a Member of the Institute in 1948) calls these lines a “serious blemish on a beautiful poem; and the reason must be either that I fail to understand it, or that it is a statement which is untrue. . . . The statement of Keats seems to me meaningless: or perhaps, the fact that it is grammatically meaningless conceals another meaning from me.”⁴⁰

The problem arises in part from the text itself, that is, the punctuation of the couplet, which varies in each of three redactions known to have been formulated during Keats’s lifetime (there is no holograph manuscript). Four handwritten transcripts made by friends who read Keats’s handwritten version(s) survive, and the poem was published twice in Keats’s lifetime. The import of the lines changes in these variants, and the problem is of prime importance for Keats’s poem, both its title and its meaning.⁴¹

Version 1

This version is based on a comparison of the four transcripts by friends. They agree on the wording, but not on capitalization.

Beauty is Truth,—Truth Beauty,—that is all
Ye know on earth, and all ye need to know.

Version 2

This version appeared in the *Annals of the Fine Arts, for MDCCCXIX*, probably published in January 1820.

Beauty is Truth, Truth Beauty.—That is all
Ye know on earth, and all ye need to know.

Version 3

This version appeared in the volume of Keats’s poetry, titled *Lamia*, published in July 1820; he may not have been well enough to correct typographical errors.

“Beauty is truth, truth beauty,”—that is all
Ye know on earth, and all ye need to know.

Interpretations are basically three. Based on versions 1 and 2, both lines are part of the poem itself, which either the Poet or the Urn is addressing to the reader. The third understanding, buttressed mainly by the quotation marks in the *Lamia* version, and most widely accepted, was formulated by the great Romance philologist Leo Spitzer:⁴² the commemorative urn speaks to the reader, quoting an adage, or sepulchral epigram about the identity of Truth and Beauty, addressed with comforting reassurance to the earthbound viewer. In this case, the complex metaphor embraces the urn, the inscription, and the poem itself, and evokes the long Greek tradition of commemorative monuments that pronounce an oracular message to the present from the past.⁴³ Most such vocative texts occur on funerary and commemorative works, and ancient vases were commonly thought to have funerary functions.

Much of the relevance of Keats’s lines to the Institute lies in their prehistory, as it were, that



Fig. 20 Attributed to John Keats, drawing after the Sosibios vase



Fig. 21 Tommaso Piroli, Sosibios vase, whole and detail of Dionysian ceremonies frieze, engravings

is, the intellectual climate from which they emerged, and which they may be said to culminate. In fact, Keats's formulation epitomized a long tradition from Shakespeare through the eighteenth century that explored in poetry, aesthetics, and philosophy the relationship between truth and beauty, sometimes closely approximating Keats's ideas.⁴⁴ In many respects, the concluding lines of the Ode hark back to the "Threnos" that concludes Shakespeare's sad and enigmatic lament known conventionally as "The Phoenix and the Turtle" (it was published without a title): the ashes of Truth and Beauty lie buried in a cinerary urn.

Beauty, truth, and rarity.
Grace in all simplicity,
Here enclos'd in cinders lie.

Truth may seem, but cannot be:
Beauty brag, but 'tis not she;
Truth and beauty buried be.

To this **urn** let those repair
That are either true or fair;
For these dead birds sigh a prayer.⁴⁵
(emphasis mine)

Although, so far as I have learned, no one before Keats had stated the relationship between Truth and Beauty in such absolute terms, the philosophical and conceptual antecedents lay in the great explosion of interest in the Platonic notions of Truth and Beauty, in themselves and the relationship between them, that emerged in the late seventeenth and eighteenth centuries, especially in England but also in France and Germany, that is, the Enlightenment. Along with increasingly sophisticated developments in science, the period brought new awareness and explorations of emotions that went beyond and beneath what might be called the power dynamics of Baroque rhetoric, toward more delicate, subtle—we might say nuanced—aspects of the human psyche. Aspects of the world often thought of as "incidental" or "minor" or "ornamental," even frivolous, were explored under the general rubrics of "emotion" and "the sentiments." Crucial and synchronous to this development was the great revival of classical antiquity occasioned by the rediscovery and excavation of Pompeii, which revealed the full range of ancient culture as never before—not just the grandiose build-

ings and monumental statues long known from the remains of Rome, but also the newly discovered details of domestic life and its settings. The new trove of ancient physical culture was exploited in collections of engravings and etchings that celebrated these private mementos from the deeply hidden past.⁴⁶

Keats's urn is a case in point—a drawing in the Keats-Shelley House in Rome (the apartment where Keats lived and died), attributed to Keats by an inscription, is based on an engraving of the famous marble vase in the Louvre, outstanding because it is signed in Greek by an otherwise unknown artist, Sosibios of Athens (Fig. 20 and Fig. 21).⁴⁷ The subjects described by Keats on his poetic urn do not correspond to any known work, but the sculptor's signature, ΣΩΣΙΒΙΟΣ ΑΘΗΝΑΙΟΣ ΕΠΟΙ[ΕΙ], inscribed on the base of a burning altar between approaching devotees, may have been precisely what attracted Keats to the Sosibios urn (Fig. 22).⁴⁸

Keats had been concerned with death since an early poem, titled "On Death"; tuberculosis was a "family disease," his mother having succumbed to it in 1810, his brother Thomas on December 1, 1820, at age 19. The famous group of Odes was composed from the spring to the autumn of 1819; the early symptoms of the disease that would also take his life began that fall and culminated with a major attack on February 3, 1820, followed by his death in Rome on February 23, 1821.⁴⁹ Keats's preoccupation with death resonates in the "Ode to a Nightingale," composed just before "Ode on a Grecian Urn," where he imagines himself dead, like a "sod" beneath the flight of the eternal bird.⁵⁰ In the "Grecian Urn," the poet substitutes his voice for that of the artist of the ancient marble vase, speaking from the inner depths of Truth and Beauty. Reason, sentiment, and neoclassicism went hand in hand in the Enlightenment.

The Earl of Shaftesbury (1671–1713), the greatest and most widely read English thinker of the period in matters of arts and letters:

Nothing affects the heart like that which is purely from itself, and of its own nature; such as the beauty of sentiments, the grace of actions, the turn of characters and even the proportions and features of a human mind. This lesson of philosophy, even a romance, a poem, or a play may teach us

For all beauty is truth. True features make the beauty of a face; and true proportions the beauty of architecture; as true measures that of harmony and music. In poetry,



Fig. 22 Sosibios urn, front and back, marble

which is all fable, truth is still the perfection

Will it not be found in this respect, above all, "that what is beautiful is harmonious and proportionable; what is harmonious and proportionable is true; and what is at once both beautiful and true is, of consequence, agreeable and good?"⁵¹

Sir Joshua Reynolds (1723–92), England's greatest painter in the Grand Manner:

This beauty or truth, which is formed on the uniform eternal and immutable laws of nature, . . . of necessity can be but *one*.⁵²

Friedrich Schiller, who was immensely popular in England and to whom Keats himself referred in one of his letters, in an epic poem of 1789, called "The Artists":⁵³

Upon her sunny throne upraising,
Urania, so dreadful yet so grand,
Unburdened of her crown ablazing,
Does there—as Beauty 'fore us stand.
The belt of grace 'round her receiving
That she, as child, the children understand:
What here as Beauty we're perceiving,
Will first as Truth before us come to stand.⁵⁴

Keats was well aware of these presentiments, and in fact he defined the nature of his own leap forward identifying Truth and Beauty, in letters written before (late 1817) he composed the ultimate formulation in the "Ode on a Grecian Urn" (1819).

To Benjamin Bailey, Burford Bridge, November 22, 1817:

I am certain of nothing but of the holiness of the Heart's affections and the truth of Imagination—What the imagination seizes as Beauty must be truth—whether it existed before or not—for I have the same idea of all our passions as of love: they are all, in their sublime, creative of essential beauty.⁵⁵

To George and Thomas Keats, Hampstead, December 22, 1817:

The excellence of every art is its intensity, capable of making all dis-



Fig. 23 Cesare Ripa, *Verità*, woodcut

agreeables evaporate from their being in close relationship with Beauty and Truth.⁵⁶

The key to Keats's thought, the crucial step further he took, lay in the certain knowledge (I emphasize both *certain* and *knowledge*) that the intensity of feeling, emotion, sentiment, occasioned by things perceived, real or imagined, is indistinguishable in value and validity from truth. What emerged, essentially, was the unprecedented notion that there are two reciprocally and constantly operative aspects of *both* truth and beauty, one abstract and intellectual, apprehended through reason, the other intuitive and apprehended through the emotions and the senses.⁵⁷ Keats for the first time grasped the reciprocity of these binomials clearly and formulated their relationships in the lapidary aphorism that concludes the "Ode on a Grecian Urn."

Twinning Truth and Beauty

We have no idea if Flexner had any idea what the seal he requested was to look like. But no less remarkable than Flexner's thought was what happened when Bosworth received the request and Turin responded to it.⁵⁸ The radical novelty was that the design should serve not only as an official seal, an imprinted image, but should also be modeled as a medal eventually to honor people of particular distinction in their association with the Institute. In contrast to seals, medals have a specifically honorific and commemorative function, and it was surely with this in mind that Bosworth recommended a medalist to create the work, and that in Pierre Turin's hands, Truth and Beauty became two female personifications.

Ancient medals displayed on their reverses all sorts of personifications conveying the political message of the ruler or city that issued them—Hilarity, Abundance, etc.—not the sort of abstract thought underlying the kind of research Flexner had in mind for his institute. Truth does not occur as a personification in antiquity, and neither does Beauty, except of course in the person of the goddess Venus.⁵⁹ Images of such abstract thought-concepts, which I should call "pure"

visualizations, did emerge in the Renaissance with the development of a vast repertory of emblematics, combining and adding to the repertoires of sigillography and numismatics into an independent domain comprising virtually all aspects of human conceptualization—a domain known as iconology after the title, *Iconologia*, of a book by its most famous practitioner, Cesare Ripa (Fig. 23 and Fig. 24).⁶⁰ First published in 1593, it became a kind of bible for conceiving and imagining ideas in all fields, with innumerable editions in many languages. Ancient personifications were generally female as the nouns they represented were generally feminine, and the figures were generally nude unless the concept required otherwise. So indeed, in

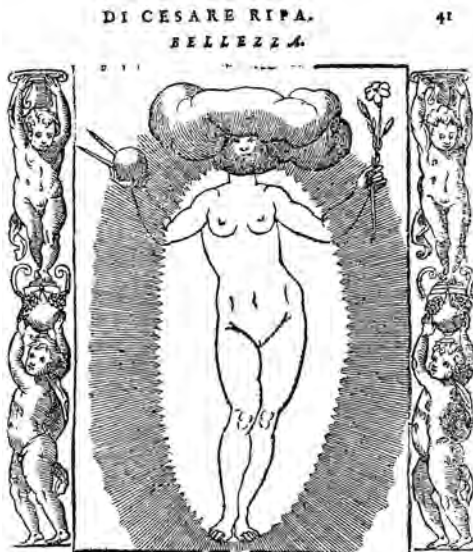


Fig. 24 Cesare Ripa, *Bellezza*, woodcut



Fig. 25 Jean Auguste Ingres,
Venus Anadyomene

Fig. 26 Raphael Sanzio,
The Three Graces, 1504–05

Fig. 27 Peter Paul Rubens,
The Three Graces, 1630–35

Ripa we find, for the first time, as far as I know, Truth and Beauty illustrated as independent concepts by nude female figures bearing their own proper names. Ripa makes no connection between them, however, and they occur at their appropriate letters of the alphabet.

I am aware of no precedent for such a pairing of personifications of Truth and Beauty, any more than there was a precedent for Keats's identification of the two concepts. Like anyone trained in the French Academic tradition, especially in Rome, where he spent years as a Prize Fellow, Turin certainly knew his Ripa. He did not, however, turn to Ripa as a model for his figures, but rather to the more elegant and sensual forms of the greatest of French nudes, Ingres's *Venus Anadyomene* (rising from the sea) in the Musée Chantilly, where one of the putti who accompany her holds a mirror (into which she does not gaze) to reflect her beauty (Fig. 25).⁶¹ He also had in mind an iconographical tradition that would express metaphorically not only the pairing of Truth and Beauty but also their conflation in Keatsian terms, that is, the tradition of the interlocking nude female figures of the three Graces. In their most familiar form the Graces are shown aligned, one seen from the back in the center flanked with arms interlocked by another facing front on either side (Fig. 26). Rarely, they might be shown in a compact grouping facing each other (Fig. 27). For the inextricability of their union, Turin specifically echoed the Graces in a monument in the Louvre by Germain Pilon (ca. 1537–90), one of the pre-eminent sculptors of the French Renaissance, where the figures are arranged in a rotating tripodal group (Fig. 28).⁶² In



Christian tradition, the Graces were often identified with the cardinal virtues, and Pilon's figures are modestly clothed, as they had been in Pilon's model, a celebrated incense burner designed by Raphael to commemorate Francis I, recorded in an early sixteenth century engraving (Fig. 29).⁶³ Raphael's design and Pilon's sculpture were veritable icons of French political and cultural heritage because of their function. There was a tradition that upon the death of a king, vital parts of his body were extracted and preserved in separate monuments, distinct from the tomb. Raphael's censer exhumed the memory of Francis I, and Pilon's urn contained the heart of Francis's son Henry II—taken together they were a particularly concentrated and poignant version of the ritual augury, "The King is dead. Long live the King."⁶⁴ And in this sense, too, Turin must have associated Pilon's sculpture with Keats's concluding consolatory message. What particularly interested Turin were the entwining arms and hands of two of the figures that Pilon had adopted from Raphael's design. Beside the fact that Turin's figures are clearly the same persona, physically and physiognomically, the motif embodied in the most delicate and sentimental terms Keats's definition of the community of Truth and Beauty, and the commemorative evocation of the Grecian urn.

While Truth and Beauty were personified separately by Ripa, Turin combined them by juxtaposing Ingres's Venus figure side by side as mirror images, nude in the case of Truth, draped in the case of Beauty. The juxtaposition represents a conflation of two distinct traditions elicited by the aphorism pronounced by Keats's urn. Discoursing on love in the *Symposium*, Plato speaks assertively of two goddesses of love, that is, Aphrodite:



Fig. 28
Germain Pilon,
Graces
supporting the
urn for the heart
of King Henry II,
1560

Fig. 29
Marcantonio
Raimondi, after
Raphael, Censer
for the funerary
urn of Francis I,
engraving



Fig. 30 Titian, *Sacred and Profane Love*, 1514

Does anyone doubt that she [Aphrodite] is double? Surely there is the elder, of no mother born, but daughter of Heaven (i.e., Uranus), whence we name her Heavenly (Urania); while the younger was the [natural] child of Zeus and Dione (the earth goddess), and her we call Popular (Pandemos).⁶⁵



Fig. 31 Altviti Aphrodite

And indeed two celebrated sculptural evocations of Venus, one nude, the other draped, by Praxiteles (mid-fourth century B.C.), are described in a dramatic passage by Pliny.⁶⁶ The staid citizens of Kos, who had first choice, opted for the draped figure, while the nude was sold to Knidos, where she became famous throughout the world. The nude celestial Venus, born full grown from the sea, where Zeus had immersed his genitalia, leads us into a realm beyond sensory perception, while the natural-born, terrestrial Venus rules the world of nature accessible to the eye and ear.⁶⁷

In a brilliant study published in German not long before he emigrated to America and became a professor at the Institute for Advanced Study, Erwin Panofsky showed that the tradition of the two Venuses was revived in the Renaissance and underlay one of Titian's most famous paintings, in the Borghese Gallery in Rome, showing evidently the same woman dressed and undressed, known since the early seventeenth century as *Beauty Unadorned* and *Beauty Adorned* (*Beltà disornata e Beltà ornata*), and since the late seventeenth century as *Sacred and Profane Love* (Fig. 30).⁶⁸ It is not impossible that Bosworth himself was aware of the two Venuses tradition, as well as Titian's picture, from his earlier involvement with the acquisition of the Altviti Aphrodite, on which he published a monograph with a learned commentary by his friend Charles de Kay, the former art editor for the *New York Times*, who boldly attributed the work

to Praxiteles (Fig. 31).⁶⁹ Turin certainly knew the picture from his years at the French Academy in Rome, at the edge of the Borghese gardens on the Pincian hill. In effect, Turin's seal conflated the artistic tradition of the twin goddess of love, i.e., Venus, i.e., Beauty, with Keats's poetic twinning of truth and beauty, thus embodying visually their relationship defined in Keats's verses: the beauty of truth in the abstract domain of the intellect, and the truth of beauty in the earthly domain of nature and the sentiments. Turin fused the traditions not only physically but in their attributes. Truth displays a mirror, which represents the true form of what it reflects, as does the figure of Feminine Beauty in particular, in a moralizing description by Ripa: she holds out a mirror without looking at it, because feminine beauty is itself a mirror which presents the viewer to himself in the more perfect form he would like to attain;⁷⁰ Beauty, as Pandemos, her eyes cast demurely earthward, arranges her rippling tresses in reference to the watery birth of her celestial twin-sister self. Just as Keats said, there are two Truths and two Beauties, both heavenly and earthly, which in our passions and in our love are but one.

Law of Three

In place of the third figure in Pilon's group, Bosworth, with Turin's agreement, introduced a third element according to what he called "the law of three."

[Turin] agreed with me that to make a good-looking Seal, we ought to have three things instead of two. In other words, the Tree of Knowledge growing out of Truth and Beauty, as the third, uniting the two.

The next time I see you, I will give you a long lecture on the law of three—in all things visual. I am hoping that you will agree that the fruit of pursuing "Truth and Beauty"; in your Institution, is "Knowledge"; and that the force of the "Truth and Beauty" idea, is rather strengthened than weakened, by letting it figure as a fruit-bearing tree, beside which they stand." (Bosworth to Flexner, December 18, 1930, Appendix B. 2.)

It is important to realize that the Law (or Rule) of Three is not the same as Symmetry, for it involves not just the juxtaposition of the parts but also the relationships between them:⁷¹

$$\frac{A}{B} = \frac{C}{X} \qquad X = \frac{B \times C}{A}$$

Bosworth's tertium quid between Truth and Beauty was none other than the Tree of Knowledge (Fig. 32)—Knowledge as such, as it were—precisely the concept subtended by the oracular urn in the last line of the Ode to the equation of the two in the preceding line. In my opinion, Bosworth, Turin, and Flexner understood Keats's poem in this way, and thus captured its meaning more profoundly and concisely than any of the commentators I have read. Truth and Beauty are equal, inseparable and ultimately indistinguishable paths toward one end, Knowledge, which is indeed all we can or need to know on earth, and the pursuit of which is exactly the kind of research Flexner envisioned for his new Institute.⁷²



Fig. 32 Albrecht Dürer, *The Temptation*, engraving

In a way, I think the Tree of Knowledge bearing apple-like fruit was the boldest invention of all. Placed between the two figures according to the Rule of Three, it inevitably evokes, and I suspect was deliberately intended to do so, the traditional portrayal of the Temptation of Adam and Eve, to whom the fruit revealed the knowledge of good and evil, whence they were expelled from Paradise into this world, where they were condemned to labor for their sustenance. The labors required by the Institute's

Tree were the pursuit of Truth and Beauty, and the Knowledge that on earth they are identical and sufficient.

Beyond Education

While the association of Truth and Beauty with the program of the Institute may seem obvious and natural to us today, it certainly was not when Flexner made the association. Flexner's knowledge and appreciation of the Ode were profound; his wife Anne did serious and extensive research for the play—*Aged 26*—she wrote and produced about the poet's death.⁷³ But the linkage between the Ode and the Institute required a fundamental leap of the imagination, which sprang, I think, from Flexner's much earlier, indeed lifelong, and much broader concern with problems of education and intellectual endeavor, most especially in modern America.

The underlying concept evolved from Flexner's zealous and persistent efforts to reform American educational principles at

both the secondary and college levels, abandoning the overriding dominance of the classical tradition in favor of emphasis on subjects and methods that would have greater relevance to and resonance in the lives of American students. (It is essential to bear in mind, however, that Flexner was first and foremost a teacher of Latin and Greek, and he remained fully appreciative of their importance.) The enormous influence of Flexner's innovative ideas in the field of education and learning began when the extraordinary success of a secondary school he had founded and directed in Louisville, Kentucky, attracted the notice of the President of Harvard, Charles W. Eliot, whom he visited in Cambridge to explain his methods; Eliot had urged him to write what became his first article on education, "A Freshman at Nineteen," published in *Educational Review* in 1899.⁷⁴ There ensued a lengthy critique of the American college in 1908, followed by anti-traditional polemics that actually bore the title "A Modern School," first in 1916, republished in 1923 along with a revision of the first book, now called *A Modern College*.⁷⁵ His criticism of American universities and call for their dedication to higher learning, exceeding even that of the European systems he admired, culminated in his major and most controversial work comparing English, German, and American universities, published in 1930, the same year the Institute was founded.⁷⁶ The radical nature of Flexner's twinning of science and humanism with truth and beauty arose in part from the radical nature of his concept for a "modern" university, by which he meant a university devoted exclusively to the pursuit of higher learning for its own sake and without regard to practical value. He had bitterly criticized the American university system where advanced research was overburdened and diluted by the demands of undergraduate teaching and myriad other duties and distractions, which he thought more properly belonged in the secondary schools. He found inspiration and confirmation for some of his ideas in the English and especially the German universities, which he studied carefully and at first hand. But he went much further, eliminating altogether the obligation to teach, and all other distractions, including administrative duties and the awarding of degrees. In these respects the closest precedents were the Institut Pasteur in Paris, founded in 1887, which he called "the first modern research institute," and the original Rockefeller Institute for Medical Research (later Rockefeller University), founded in 1901 under the directorship of Abraham's older brother Simon. Both were devoted to a single field, however, and included laboratories, with practical value their *raison d'être*. All Souls College, Oxford,

which was, however, appended to a university, was not created *ex novo*, and had evolved informally over time.⁷⁷

Flexner's ideas have often been challenged, especially in the context of universities, i.e., institutions of "higher learning," and especially the principle he espoused of full-time, tenured faculty devoted entirely to research.⁷⁸ (Abraham Flexner was never an academic, as most of his critics were.) The reaction was especially strong during the 1960s, when universities were under attack for their "elitism." It is a notable testimony to the continued importance of Flexner's challenge that the book of comparisons was republished nearly half a century later, in 1967, with a warmly affirmative introduction by Robert Ulich, the great philosopher and Professor of Education at Harvard.⁷⁹ And it is a further, if ironic, testimony to the book's importance that the traditional system of teaching, undergraduate as well as graduate, combined with research, was vigorously defended by Clark Kerr—who as President of the University of California, Berkeley, had presided over the elevation of that institution to the leading state university in America—in an appreciative but acidic introduction to another reprinting of Flexner's work the very next year.⁸⁰

Science and Humanism

The underlying substance of the seal's binary equation may be perceived in two of Flexner's publications, separated by a decade but perfectly complementary, which might be said to span the vast domain of the Institute's pursuit of knowledge.

In his autobiography, Flexner reports that the first essay originated in a memorandum report he had submitted in 1922 to the General Education Board (a great agency funded by the Rockefeller Foundation to improve American education, of whose board he was a member) in which he had discussed the decline of the great German tradition of research-oriented universities in the wake of World War I, and called for the establishment of a new American university dedicated primarily to research and without undergraduates (Appendix B. 3.).⁸¹ Flexner subsequently developed the memorandum into a famously and provocatively titled lecture, "On the Usefulness of Useless Knowledge," which he first delivered as the commencement address at Bryn Mawr College in 1937, and then published, much expanded, in *Harper's Magazine* in 1939.⁸² The paper is dedicated to the thesis that all fundamental advances in knowledge, especially in the sciences, arise not from the pursuit of fame and fortune, but from the free and uninhibited exercise of man's innate and irresistible sense of curiosity. Although full of charming and witty anecdotes about scientists and scientific explorations in a remarkably wide range of fields, Flexner is serious and inspired about his radical and counterintuitive thesis. He starts with Marconi, whom he regards as a very clever exploiter, for fame and profit, of the fundamental mathematical discoveries in the field of electromagnetism of Maxwell and Hertz. The real credit for the creation of wireless communication and all its subsequent benefits belongs to two thinkers who had no mind for the practical application of their work. Flexner goes on and on in this vein, with a dazzling display of knowledge of the intricacies of scientific development in many fields, through Faraday, non-Euclidean geometry and group theory in mathematics, Einstein's ideal gas and the behavior of liquid helium, bacteriology, and the accidental discovery of the chemical principle that revolutionized the technique of processing rayon thread—innumerable instances in which abstract, disinterested science produced immensely important practical consequences, some good, some bad, without intending to do so. The last paragraphs are devoted to a description of the Institute for Advanced Study as the realization of this ideal of a free and unencumbered ex-

ploration of ideas, open without prejudice to those who qualify.

The second article, "The Burden of Humanism," was delivered as a lecture at Oxford University and published in 1928.⁸³ Here, Flexner focuses on the relationship between humanism, which he does not explicitly define, and what he calls the outstanding nonhumanistic features of modern life, namely science, industry, and democracy. His main concern is with science and its endemic capacity to do much good, but also to do much harm. His argument is that fundamental science is motivated by curiosity and done in a spirit of impartiality; his shining example is Pasteur, who, although eminently moral, religious, and patriotic, was not primarily interested in disease as such, but in "the pathological conflict between the physiological properties of the micro-organism and the cells of the tissues." It is the role of humanism and the cultural values it embodies to distinguish between good or bad, beautiful or ugly, wholesome or not, worthwhile or not. The burden of humanism is to confront these difficult issues, to assess the values attendant upon the facts indiscriminately ascertained by science.

The interdependent and mutually responsive relationship between humanism and science envisioned in these texts lays at the core of Flexner's thought. And science and the humanities—these polar extremes that touch—were at the forefront of Flexner's mind when he formulated the Institute's logo, commemorating the paradoxical conjunction of opposites in the Institute's mission with the paradoxical closing lines of the "Ode on a Grecian Urn," where the extremes of Truth and Beauty touch in their common search for knowledge.

Art and Science

The relevance of the concepts of truth and beauty to science was more or less implicit throughout the history of their relationship. But the theme became explicit and central in an essay by the eminent British artist, art critic, and pioneer promoter of modernism at the turn of the twentieth century, Roger Fry (1866–1934, Fig. 33). As Flexner championed a modern education and a modern university, so Fry championed modern art, beginning in 1906 when he became Curator of Painting at the Metropolitan Museum of Art, where he discovered Paul Cézanne. A hugely successful volume titled *Vision and Design*, published in 1920, included a 1919 essay called "Art and Science," the first work I have discovered devoted explicitly to that theme, and a subject on which Fry could speak with some authority, having, as an undergraduate at Cambridge, taken a first in the National Science topos.⁸⁴ Fry is concerned

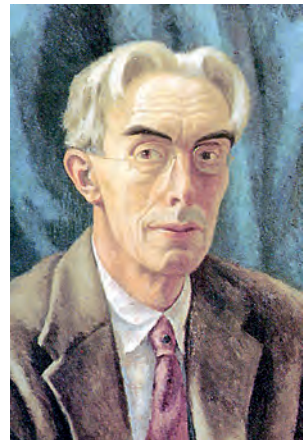


Fig. 33 Roger Fry, self-portrait, 1930–34

above all to identify the underlying motives that induce artists and scientists to pursue their work, that is, curiosity and satisfaction. In the artist, curiosity to distill or abstract from his experience an aesthetic formula whose coherence provides a feeling of satisfaction that is, as he says, "curiously parallel to that which the mind gets from the recognition of abstract truth." The process of recognizing the necessity of the relationships embodied in that aesthetic coherence corresponds to the logical process, which in science arrives at truth.⁸⁵

It may be that Fry and Flexner were acquainted. While Fry was a curator at the Met, at 83rd and Fifth, where Rockefeller was a great patron, Flexner as former secretary of Rockefeller's Committee on General Education, lived on 72nd Street between Fifth and Madison. Fry was certainly well acquainted with the Flexner family: years later (1926) he wrote to his friend Kenneth Clark, the great British art historian who was preparing for a visit to New York, that he should not fail to look up Helen Thomas, the wife of Simon Flexner, "the most charming woman in America."⁸⁶ We can only surmise that if Fry met the Simon Flexners, he must also have met the Abraham Flexners.

The Naming

No less astonishing than the concept of an institution dedicated exclusively to the pursuit of useless knowledge at the highest level, was the name chosen to describe it, for which I have found no real precedent. The notion of an institute, so called, for study had long been embodied in the German university departments and academic chairs devoted to research and teaching in specific fields at the postgraduate level.⁸⁷ Emulating Germany, the idea of advanced study was nominally enshrined in the French *Écoles des Hautes-Études* devoted to particular disciplines, which their names reflect; they are called *Écoles* for their educational, indeed, degree-awarding role, and they are part of the University of Paris. Perhaps the closest precedents for permanent full-time research faculty were All Souls College at Oxford University and the original Rockefeller Institute for Medical Research. But I have not been able to discover an independent, self-sufficient Institute for Advanced Study, full stop. This ideal, and the ultimate goals of its pursuit as Flexner conceived them, is what the Institute's seal articulates, in words as pure and simple as the concept itself.

The title chosen for the new invention was as original in its way as was the name Aby Warburg conceived almost simultaneously for his institutionalization of his revolutionary kind of

meta-history, devoted not to individual fields but to that universal yet scarcely definable creation of mankind, culture, pure and simple: Kulturwissenschaftliche Bibliothek. The first title suggested for the Princeton corporation was “The Institute of Higher Learning,” or “The Institute for Advanced Studies.” Curiously, and perhaps appropriately enough, the name seems to have emerged at the last minute, as the donors’ declaration of intent was being drawn up. Only in the actual “Certificate of Incorporation,” May 20, 1930, was the official name established “Institute for Advanced Study—Louis Bamberger and Mrs. Felix Fuld Foundation.”⁸⁸ The decision was honored in the breach virtually from the outset, in favor of the commonly used appellation, “The Institute for Advanced Study,” in the singular and pure and simple, a perfectly apt description for this utterly novel, sublimely naïve ideal of an institution devoted to independent research at the highest level, with no pedagogical or disciplinary mission, and no academic affiliation. In 1987, under the directorship of Marvin L. Goldberger, the official name, even more profound and generic without the initial article, was revived.

* * *

I would say, in sum, that two fundamental, typically American, utopistic ideas together seem to have motivated Flexner’s world view: the idea of pure research—that is, curiosity- and satisfaction-driven research in pursuit of new knowledge as an end in itself—and the idea of modernity, a distinctively American modernity.

And as a final note, I would like to add that this whole discussion has an ironic personal twist in my own experience at the Institute. Some years ago, I wrote a piece in which I made bold to argue that art history has, or can have, the kind of validity we normally associate with science.⁸⁹ I encountered a luminous essay by a now deceased and sorely lamented professor in the School of Mathematics here, Armand Borel (Fig. 34). It was the beginning of a cordial friendship, occasionally warmed by listening together, in absolute silence, to his amazing collection of vintage jazz records. The essay was titled “Mathematics: Art and Science.”⁹⁰ The subject had long been a matter of sometimes acrimonious debate. With no reference to the Institute’s seal or to Keats, but with much reference to truth and beauty, Borel’s view was emphatically: *Both*.



Fig. 34 Armand Borel



Fig. 35 *Venus Anadyomene*, Roman copy



Fig. 36 Lapis pendant, ca. seventh century



Fig. 37 Lombardo, *Venus Anadyomene*, ca. 1510–15



Fig. 38 Vernon, *Eve and the Snake*, 1905



Fig. 39 Pollaiuolo, *Prudence*, 1470

Appendix A: Images related to motifs on the medal

The motif of a standing, frontal nude female has a storied history in classical art; Pliny's description of Praxiteles's two Venuses has been discussed. Pliny describes an additional motif in a lost painting by Apelles that underlies all later compositions of the *Anadyomene*, or *Nude Venus Rising from the Sea, Drying her Hair*.⁹¹ The motif was ubiquitous in the art of antiquity, be it marble statues (Fig. 35), in mosaics, or the minor arts (Fig. 36), e.g., a tiny golden Venus standing within a Lapis lazuli clamshell, clothed below the waist.⁹² It was often recalled in the Renaissance, for example, by Antonio Lombardo (1458–1516) in his small marble relief (Fig. 37).⁹³ The most admired and closest in time to Turin's medal is Ingres's glorious composition of 1848 in Chantilly, already considered. The idealized, hip-shot young beauty took her place as a model of female flexibility and responsiveness, and was used more than once by Ingres himself, as we will see in a moment. Turin's teacher, Frédéric-Charles-Victor de Vernon, recalls Ingres's contrapposto nude in his figure of Eve in his miniature bronze diptych (Fig. 38), which pairs the temptress with the tree around which a devastating serpent twines.⁹⁴

Turin could have had both elements in mind when, for his figure of Truth, he transformed the Venus into a modern girl with bobbed hair, sturdy physique, and turned her frontal gaze directly on the spectator. He gave the manipulation of hair to the other figure, to Beauty, who fingers her tresses on the right side of her head.

The long-handled mirror in Truth's hand recalls not only Ingres's glass, but also images of the virtue of Prudence, as seen in the painting by Piero del Pollaiuolo (Fig. 39). The mirror traditionally symbolizes the ability to see past events which are evaluated in the present, thus providing awareness of what might happen in the future.⁹⁵

The posture of the arm over the head, bent at the elbow, stems from the classic *Water Bearers* (*Hydrophoroi*) on the Parthenon (Fig. 40). The pose seems to have been a persistent motive for Ingres; he began a torso in this pose early in his career (1823), used it for the Chantilly *Venus*, and carried it on in 1856 in his famous image known as *La Source* (Fig. 41). The girl, now somewhat more fulsome than the Venus, supports an amphora out of which spills a stream of water, reminiscent of her aqueous forbearer and the source of the river at the headwaters of which she stands. As opposed to the indolent glance of Venus, she confronts the spectator with a direct, unselfconscious gaze.⁹⁶ Ingres clearly had in mind the *Water Bearers* on the North Frieze of the Parthenon when designing these figures.⁹⁷ And C. Paul Jennewein had both precedents in mind in 1934–36 when he carved his Art Deco version of the *Allegory of Water* (Fig. 42) in the Department of Justice in Washington, DC.⁹⁸

The “arm-over-head” motif had a second life, this time without an obvious function. It appears frequently in classical art as an expression of languid sensuality. A life-size basalt statue of Apollo in this position exudes this sentiment as he leans on his lyre (Fig. 43). The emotion is accentuated by his delicate features, and smooth, highly muscled body. The oft-replicated *Sleeping Ariadne* in the Vatican (Fig. 44), sleeps in this position, alluding to her passion for Theseus and lack of premonition of her abandonment.⁹⁹



Fig. 41 Ingres, *La Source*, 1856



Fig. 42 Jennewein, *Allegory of Water*, detail



Fig. 40 *Water Bearers*, Parthenon, North Frieze, fifth century B.C.E.



Fig. 43 *Apollo with his Lyre*



Fig. 44 *Sleeping Ariadne*

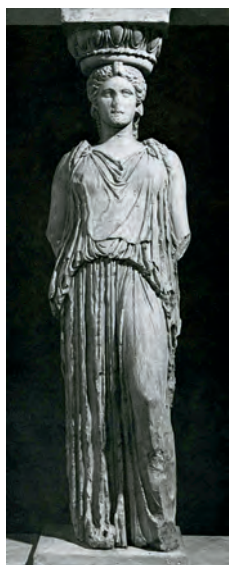


Fig. 45 Caryatid

For the figure of Beauty, Turin reversed the contrapposto pose of Ingres's figures and clothed her in a sheer Greek v-neck kiton that exposes the shape of her breasts and leaves her arms bare. The waistline consists of a pleated peplos, descending diagonally above the hip. This style of dress stems from the classic fifth-century B.C.E. mode, exemplified by the caryatid of the Erechtheion on the Acropolis in Athens, one of which is in the British Museum in London (Fig. 45). Beauty's left arm lifted and bent over the head shelters and frames her face, her eyes lowered demurely. At the same time, the hand touches the rigid, almost abstract locks of her hair, which cascades in a manner no doubt meant to recall the rippling waves from which she was born.

The last motif to discuss is the one that binds the two figures together: their entwined arms and hands, lovingly joined in a warm clasp. This rare motif is obvious to interpret: a sign of friendship, fidelity, and identity of spirit. These sentiments can already be found in the theological art of ancient Egypt: the goddess, Hathor, has descended to protect and shield her representative on earth, the Old Kingdom Pharaoh Mycerinus. To demonstrate this affection, the two figures stand in close proximity, hands joined back to back (Fig. 46). Secular, but no less devoted are the nymph-caryatides supporting the urn in Raphael's design (Fig. 47). And finally, Turin's inspiration, the gorgeous figures by Germain Pilon, their plump arms delicately crossing and touching (Fig. 48). Turin, who surely knew both objects done for French monarchs, made the motif his own, smoothing it into the style of his time, suave, geometric, yet infinitely touching and strong (Fig. 49).

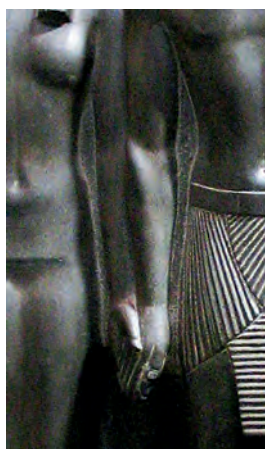


Fig. 46 Mycerinus and Hathor



Fig. 47 Marcantonio, detail of Fig. 29



Fig. 48 Pilon, detail of Fig. 28



Fig. 49 Turin, detail of Fig. 1

More Examples of Pierre Turin's Art



Fig. 50 *Repatriation of Belgian Prisoners of War*, 1945



Fig. 51 *International Exhibition of Art and Technology*, 1937



Fig. 52 *Société Générale Alsacienne de Banque*, ca. 1932



Fig. 53 *Porteuse de fleurs*, 1926



Fig. 54 *Nymph*, 1932



Fig. 55 *Printemps*, 1925



Fig. 56 *Compagnie Continentale Edison*, ca. 1932

Appendix B

B. 1. FLEXNER TO BOSWORTH, November 7, 1930

NOTICE: This document may be subject to the Copyright Law (Sect. 17) and 2a for personal use only. No part of this document may be reproduced, sold, distributed or published without the express permission of the Institute for Advanced Study, Princeton, New Jersey.

No. 1//

Seal
November 7, 1930

Dear Bosworth:

The new Institute for Advanced Study has got to have a seal, and I have been asked to procure a sketch - something very simple and characteristic. The notes that I would like struck are Truth and Beauty - not Truth alone, for I agree with you that both are elements in a national culture. I should also like English, not Latin or Greek used. Could you make a little sketch which would convey this idea? Don't bother if it doesn't interest you.

We have a characteristic cable from Eleanor today sent immediately after reaching Oxford yesterday - "Fine Everything swell". I wonder what the Oxford telegrapher thought of the word "swell", for it is an Americanism, and Eleanor knows that it is one to which I seriously object. Rascal that she is, she pokes fun at me in this way across the ocean.

I have been indoors with a slight cold the last two days but shall be out again tomorrow or next day. Anne is well and joins me in loving greetings to you, Renee, and the children.

Ever yours,

ABRAHAM FLEXNER

Mr. Welles Bosworth
198 Avenue Victor Hugo
Paris, France

AF:ESB

NOTICE: This document may be subject to the Copyright Law (Sect. 17) and is for personal use only. No part of this document may be reproduced, sold, distributed or published without the express permission of the Institute for Advanced Study, Princeton, New Jersey.

Seal

Bosworth

198 AVENUE VICTOR - HUGO

TEL: PASSY 71-86

PARIS

CABLES BOSWORTH

18th
Dec
1930

My dear Flexner: —

First let me thank you for your book. Since it arrived I have been so busy that I haven't had time to read anything, but, I have looked far enough into it to see what it is like and realise that it is going to be an epoch making thing! I congratulate you on the splendid achievement, and most of all on your independence of judgment and fearlessness in attacking such strongholds!

Of course, you yourself are in an unique position; they must all listen to you, and your words are bound to have a tremendous effect: what you do with your new Institution of learning - will be even more effective!

I have made some progress with the Seal, having had an interesting interview with Monsieur Turin - the man I wrote you about. I found that he agreed with me that to make a good-looking Seal, we ought to have three things instead of two. In other words, the Tree of Knowledge growing out of Truth and Beauty. *as the third, uniting the two.*

The next time I see you, I will give you a long lecture on the law of three - in all things visual.

I am hoping that you will agree that the fruit of pursuing "Truth and Beauty", in your Institution, is "Knowledge"; and that the force of the "Truth and Beauty" idea, is rather strengthened than weakened, by letting it figure as a fruit-bearing tree, beside which they stand. If so, the thing is achieved; and it merely becomes a matter of who can make the most masterful design!

I find there is a man named "Damman" here, of equal talent to Turin's; and I suggest your writing me (at the huge expense of sixty dollars apiece) to ask for competitive drawings. This sixty dollars will apply on a fee of four hundred dollars for the execution of the Seal, cut in steel, by the winner. The model will be made *as* any size you require. I should suggest the size of a large medal; which your Institute

Doctor A. Flexner

- 2 -

18th December 1930.

could give on special cases when merited. (The first, of course, being to the donor, and the second one to you, and the third to your Consulting Architect - on the beautiful buildings he has completed!)

This medal size could be reduced to a size suitable for pressing into your letter heads and on your diplomas.

If you wanted further competition, I would recommend the sculptor of the new coinage of the Irish Free State. It is the best work of the kind, since the days of ancient Greece! I can easily get in touch with him, if you think it worth while.

It seems to me that your Seal is a thing of great importance, and well worth spending the necessary money and taking a little time over. ~~it~~

We are looking forward to hearing from Eleanor, and expect she may turn up any day now. ~~hope so~~

Bessie joins me in affectionate greetings to you and to Anne.

As ever yours,

With apologies for corrections & not having the letter retyped - but I want it to go on tomorrow's boat -

Doctor Abraham Flexner,
150 East 72nd Street,
New York City.

WB.

NOTICE: This document may be subject to the Copyright Law (Sect. 17) and is for personal use only. No part of this document may be reproduced, sold, distributed or published without the express permission of the Institute for Advanced Study, Princeton, New Jersey.

A PROPOSAL TO ESTABLISH AN AMERICAN UNIVERSITY

I.

What is a University?

A university is a free society of scholars and students devoted to the higher training or men and to the advance of knowledge. It is properly called a "free society," because mature persons, presumably animated by intellectual purpose, must be left to pursue their own ends in their own way. The advanced worker, especially the original worker, is strongly individualistic. It is a mistake to over-organize education at any level: certainly at the higher level, over-organization is a destructive irritant.

University education is for this, among other reasons, a thing a part; for, at all the lower levels more or less organization and compulsion are necessary to the ends at which the several types of school aim; but mature students, having completed their secondary and collegiate training, and university professors, whose instruction goes hand in hand with research, should be free to work out their problems according to their own lights. They need simple surroundings, books, laboratories, and, above all, tranquility—freedom from distraction, either by worldly concerns or by the burden of parental responsibility for a more or less immature student body. A university professor should offer opportunities for study and guidance to students who want to work; and he should be an active contributor to science and scholarship. But it should be no part of his duty to entice or compel students to work. Men who rise to university posts are not, as a matter of fact, likely to be indifferent to students of solid ability and high purpose; and there is no reason why they should waste their time and interfere with their productive efforts for the sake of those who are students in name only.

II.

Real Universities

The great mediaeval universities were universities in the sense in which I am employing the term. Human knowledge was indeed very limited; and the apparatus for increasing knowledge was very slight and imperfect. But the teachers were students and scholars, keen to learn and to increase learning, as best they could, and students came to them freely to study on their own individual responsibility. In the absence of a technique for increasing knowledge, the mediaeval universities disappeared or degener-

ated into a lower type of school. For example, Oxford and Cambridge became a mere collection of colleges for the secondary training of boys.

The situation was completely changed in the nineteenth century by the development of experimental science. The conception of the university as a place for higher training and research was clarified by von Humboldt under whose influence the University of Berlin was established. In the course of the succeeding half century all the mediaeval universities of Germany and Austria were reorganized on this model, and soon the type was adopted elsewhere on the Continent—in Scandinavia, Holland, and Switzerland.

The university, so conceived, had two outstanding features: (1) a loosely organized teaching staff, the members of which could and did devote themselves singly to higher teaching and research; and (2) a large student body, the members of which, having been well trained previously, were left free to pursue their objects in their own way.

Towards the end of the nineteenth century, the success of the German university aroused both England and America. In England, efforts were made at Oxford and Cambridge to develop activities of university grade, and with a certain measure of success. These university activities were grafted on the old college or undergraduate system. The English universities are still mainly colleges for the training of a miscellaneous body of boys; but there are a few cases—laboratories or libraries in which great scientists or scholars work, more or less apart from the hubbub of undergraduate life.

III.

American Conditions

The American college was originally, and indeed, up to very recent times nothing more than a secondary school; in some sections of the country this is all it is—or at any rate should be even now. But with the development of the preparatory school and high school the college has, in its more advanced form, moved up. Though still largely a secondary school, the upper classes do a certain amount of advanced work in preparation mainly for professional school or teaching. In addition to its educational object, however, the American college cherishes—and often to the confusion and detriment of education—many other purposes; for example, it makes much of social activity and competitive physical prowess—so much, that intellectual ability is not taken seriously enough, and intellectual interest, though neither impossible nor entirely unappreciated, is in constant danger of being swamped by boyish activities. Some of

these things are in moderation good for youth, but they are worse than irrelevant in a genuine institution of higher learning.

The German conception of the university as a place for advanced teaching and research was actually embodied in the plans of the Johns Hopkins University opened in the middle seventies; and there a faculty of great distinction and a student body of university grade and purpose were assembled. But the Johns Hopkins University did not long maintain its distinctive character, and this, for two reasons: (1) an undergraduate college, started for the purpose of providing well trained students for the graduate departments, has developed all the distractions that exist in colleges that are colleges and nothing else; and (2) the funds of the institution were soon impaired, so that for two decades it was a question of life and death.

In the nineties another opportunity to create in America an institution wholly devoted to higher training and research arose at Chicago. Like the Johns Hopkins University, the University of Chicago was at its zenith at the start. It has never been so truly a university as its first few years. Its purpose has become vague; its faculty is on the whole less eminent than it was; the undergraduate body has increased in numbers and vociferousness. Despite the existence of much activity of university grade, the University of Chicago is today not distinctly different from most of our large so-called universities. In fact, they all tend made [more] and more to the same sort of thing—the University of Chicago losing ground, the others gaining ground, until all now occupy a double position which is not best for either collegiate or university work, for the present combination of undergraduate and graduate work makes the former too elaborate and expensive, while it seriously dilutes the latter.

The other institutions to which I have alluded—Harvard, Yale, Columbia, Princeton, etc.—were colleges and were called colleges thirty or forty years ago. Under the influence of the Johns Hopkins University and the University of Chicago, they have all developed graduate departments and have, therefore, dropped the name “college” for the name “university.” But in dominating spirit and interest they are mainly colleges still—secondary institutions for the training of large and rapidly increasing members of boys, mostly with slight intellectual interests. As at Oxford and Cambridge, so at all our American universities, some advanced teaching and some advanced work are carried on. But it cannot be fairly said that any one of them exists even mainly, not to say altogether, or the prosecution of serious work at a high scholarly or scientific level.

We may say, then, that in America there exists no university in the Continental sense; we possess no institution simply and wholly

devoted to higher teaching and research. We have at best colleges, with more or less important appendages in the shape of graduate or professional schools. Nowhere have we assembled a homogeneous faculty of productive scientists and scholars with a homogeneous student body of mature, independent, and self-responsible workers. On the contrary, everywhere the prestige of undergraduate activities and interests—some of them wholesome and some very unwholesome—hampers the serious objects for which real universities exist. The two conceptions—college and university—are at cross purposes. Science and scholarship suffer; money is wasted; even undergraduate training is, under these conditions, less efficient than it might be, if left to itself.

IV.

Research Institutions

The establishment of research institutions has to some extent furnished a refuge for intense workers who could not be happy or most effective in our nondescript universities. But research institutions, valuable and necessary as they are, cannot alone remedy the difficulty—first, because relatively few men are most happy and effective if their entire energies are concentrated solely upon research; second, because the number of young men who can be trained in research institutions is necessarily limited. Both these reasons are important. Many productive teachers are stimulated by contact with students, provided the students are serious and competent and the relationship is not that of guardian and ward; and such teachers do their best in universities rather than in research institutions, where, their contacts being fewer, they are driven back largely upon themselves. Again, if research institutions admit too many young, even though serious, workers, in quest of training, they lose their peculiar character. Research institutions cannot, therefore, take the place of universities where men receive higher training in scholarship, science, or a learned profession.

V.

An American University

If the Johns Hopkins University or the University of Chicago had been established in 1920, instead of 1875 or 1890, neither institution would have an undergraduate department. There is today no lack of college graduates; and of these there are enough who are well-trained and serious to furnish the varied and mature body of advanced workers that a real university requires. The university idea—the university conceived as a free society of productive scholars and serious independent students—would undoubtedly

by this time have succeeded in Baltimore or Chicago, even if the undergraduate department had never been started in either place. The need is far more urgent now than it has ever been, for the college is a millstone about the neck of the graduate school. To no small extent the best brains of the country are working in spite of, rather than because of, the conditions supplied by our institutions of learning; young men who might lead productive intellectual careers cannot find a thoroughly sympathetic environment; we are producing less in the way of thought and knowledge than we might readily produce; we are training fewer men at a high level than we might train, and we are training them less well. A real university—a university free of undergraduate students, free of the distractions that the college involves, free of the routine that the college needs—would attract investigators, teachers and students for whom a congenial home does not now exist in America.

If it be conceded that an effort should be made to establish an American University without undergraduate instruction, an institution where scholars and scientists, free from social, athletic or other worldly distractions, can carry on their own productive work and train mature young men and women for intellectual careers, the question arises as to how best to proceed. Though the influence of such an institution may ultimately result in divorcing graduate and undergraduate work in the older universities, the college tradition is too strong to permit any such experimentation at this time; even less feasible would be the summary suppression of the undergraduate department at Harvard, Yale, or Columbia.

This step—the suppression of the undergraduate department and concentration upon real university work—might conceivably be taken at the University of Chicago or the Johns Hopkins. There are at Chicago two obstacles—(1) the strength and numbers of the undergraduate body, (2) the limitation upon the choice of the President. At Johns Hopkins the college group is neither so numerous nor so influential; Baltimore possesses, like Chicago, the advantage of a university tradition, which, though obscured, could again be brightened; and the further advantage of possessing university schools of medicine and public health. But the philosophic faculty is not sufficiently eminent, and many chairs would have to be duplicated until time does its work. Certain administrative changes would also have to be made.

There are advantages, as there are dangers, attending an altogether new creation. Eligible cities are scarce: Washington is, however, entitled to consideration.

The amount of money required would be much less if Chicago or Johns Hopkins could be freely remodelled than if a new institu-

tion were created out-of-hand. The resources of Chicago in endowment, buildings, and laboratories etc., might be adequate for the time being; it would not require an impossible addition to make Hopkins endowment suffice for some time to come. An entirely new university with faculties of philosophy, science, and medicine could hardly be undertaken without the immediate assurance of a sum approaching \$50,000,000. Any institution would, of course, require additional funds from time to time.

Decision as to the practical question is, however, not important, or even desirable, at this stage. It is, however, important to realize the confused, not to say, chaotic condition of higher education in America. Curious as it may sound this is an encouraging, not a discouraging, situation. We have, as a matter of fact, made great progress; that is why we can not accomplish something that neither President Gilman nor President Harper thought feasible. Our problem is one of the problems that arise out of progress; it is not a problem due to stagnation or retrogression.

It is, therefore, a hopeful phenomenon that secondary and collegiate education are so widely diffused and eminent scholars and scientists so numerous that the country is ready for the next forward step—the creation of a university which needs no feeding school of its own, because the country abounds in colleges by which it will be fed.

If a university so conceived were established, it would not only provide a home for scholars, scientists and students now in search of conditions favorable to intellectual exertion—it would in all probability stimulate other institutions to reorganize. Some of them might in time drop the college; others might effect a complete differentiation between college and graduate schools; still others might confine themselves to college work, on a more modest basis than is feasible so long as college and university aims are mingled. Higher education in the United State needs the new stimulus, the new ideal, which a genuine university would supply.

B. 4. MAASS SPEECH, 1955

1955 [handwritten note]

The Founding and Early History of the Institute by Herbert H. Maass

The founding and the early history of the Institute for Advanced Study are inextricably bound up with the lives of three persons —Louis Bamberger, his sister, Mrs. Fuld, and her husband, Felix H. Fuld—three persons so selfless, so generous, so eager to help any worthy enterprise or charitable endeavor that would

benefit the community, that they were signally outstanding in these respects.

Mr. Bamberger had come from Baltimore and opened a small store on Broad Street, Newark, which evolved into the well-known department store of L. Bamberger & Company, a Newark institution in which I think I am safe in saying the citizens of Newark took as much pride as did the owners. Their attorney was Mr. John R. Hardin and their accountant and business advisor Mr. Samuel D. Leidesdorf, and in later years they conferred with me on financial matters.

Always philanthropically minded, they had for years been discussing amongst themselves what they hoped eventually to do when, of a sudden, Mr. Felix Fuld passed away. This temporarily postponed their plans and left Mr. Bamberger alone as the head of a huge business and at a very advanced stage of life. Ultimately he came to Mr. Leidesdorf and me and said, "I am too old to carry on alone without the assistance of Mr. Fuld. Therefore see if you can sell my business advantageously." This was done, and upon the completion of the sale of L. Bamberger & Company to R.H. Macy and Co. their philanthropic purposes again came to the fore. Because they had prospered to such an extent in the City of Newark, they were determined that whatever they did should benefit either the City of Newark or the State of New Jersey. Thereupon Mr. Bamberger and Mrs. Fuld proceeded to discuss with Mr. Leidesdorf and me the proposed establishment of a medical college in Newark which they would endow.

At their request, we made a survey of medical education and were frequently referred to Dr. Abraham Flexner, under whose supervision a survey of medical education in the United States was conducted and under whose supervision millions of dollars were devoted by the General Education Board to improving the methods pursued in sundry medical schools. His advice to us was that there were ample medical school facilities in the United States, and that in any event no such school could be successful unless it were attached to a first-class general hospital, in addition to which he considered that it might be difficult to get able lecturers to come to Newark.

Toward the end of our first conversation he asked us, "Have you ever dreamed a dream?" I replied that I had, and he asked me to read the proofs of a book which he had just written titled "University Education, American, English and German." I read these proofs and was fascinated by their content and the suggestion they contained for the establishment in America of something comparable to the German university or something

surpassing Oxford or Cambridge, in that students would already have the degree of Doctor of Philosophy and would pursue their problems and their researches freely and independently. Mr. Leidesdorf was similarly impressed. Here I undertake to elaborate upon the record of history as contained in a book titled "I Remember," in which the author apparently forgot the genesis of his connection with the Institute for Advanced Study. Had it not been for the intensive interest evinced by Mr. Leidesdorf and me and the influence which we wielded with Mr. Bamberger and Mrs. Fuld, there may never have been such an Institute despite Dr. Flexner, his brilliant ideas and his appealing personality. As a consequence of our interview, we introduced Dr. Flexner to Mr. Bamberger and Mrs. Fuld, and there then ensued a series of weekly luncheons at which was discussed the adoption of Dr. Flexner's ideas in shaping the Institute for Advanced Study. After many months these interviews culminated in a decision by Mr. Bamberger and Mrs. Fuld to endow with \$5,000,000 such an enterprise. Time and space are too short to devote to quotation from the "Founders' letter," but I commend it to your earnest reading, for it exhibits all the facets of Mr. Bamberger's and Mrs. Fuld's minds, their generosity, their liberal views and their complete disregard of race, creed or color.

The first Board of Trustees was comprised of Dr. Alexis Carrel of the Rockefeller Foundation, Alanson B. Houghton, one-time ambassador to England and to Germany, the eminent Dr. Florence R. Sabin, Dr. Julius Friedenwald, John R. Hardin, Samuel D. Leidesdorf, Lewis H. Weed, then connected with Johns Hopkins Medical School, Edgar S. Bamberger, Percy S. Straus, Dr. Frank Aydelotte, then President of Swarthmore College, the Hon. Herbert H. Lehman, United States Senator from the State of New York, Herbert H. Maass and Dr. Flexner, who became the first Director. Of all the original officers, the only survivor is Samuel D. Leidesdorf, who in the position of Treasurer and Chairman of the Finance Committee has done a remarkable job, witness the enhancement in our endowment. From this comparatively modest beginning, which to some degree inhibited the scope of the Institute because of the limitation of the endowment, they eventually by gifts during their respective lifetimes and by the provisions of their respective wills gave to the Institute their entire fortunes, which amounted to upwards of \$15,000,000.

Princeton University very generously accorded us the use of some of their facilities until such time as we were housed in a home of our own, and we were the fortunate beneficiary of the services of Professor Oswald Veblen, formerly of Princeton Uni-

versity, who aided greatly in the establishment of the school of Mathematics and who ever since has been a tower of strength in maintaining the high standards originally set for the Institute. In 1933 there was brought to the Institute from abroad Professor Albert Einstein, whose work and theories have tended to establish the Institute so firmly in the field of mathematics physics [handwritten correction]. During the interim there was developed a splendid mathematical faculty, among them such men as Herman Weyl, Oswald Veblen, Marston Morse, John von Neumann, James W. Alexander and others whose work has shed glory upon the Institute. In addition several other fields of endeavor were undertaken, such as [handwritten correction] Greek Archaeology and Epigraphy under Professor Benjamin Meritt and Professor Hetty Goldman, the History of Modern Art under Erwin Panofsky, the seminars conducted by the late Edward Meade Earle on various phases of Modern History, the translation of the Latin codes under Professor Lowe, and at one time a Department of Politics and Economics under Professors Stewart and Warren, which upon the death of Professor Warren and the retirement of Professor Stewart was abandoned.

In the meanwhile we acquired considerable acreage in what is known as the Princeton Battleground area, and shortly thereafter at a meeting of the Board of Trustees a motion was made to build our own building and more fully establish our own identity. On this occasion the Treasurer reminded the Trustees that to build such a building, in addition to having acquired our campus site, would reduce our endowment as well as our income. I well recall Mr. Bamberger, who was seated next to me, pulling my sleeve and saying, "How much will the building cost?" I told him, "About a million dollars." He said, "Don't say anything about me, but tell the Trustees not to worry, and I will send the Treasurer a check for \$1,000,000 tomorrow morning."

During World War II, the Institute was in the foreground of government work aiding the prosecution of the war. Professors Stewart and Warren were advisors to the Treasury Department. Professor Earle and Professor Winfield Riefler were in England throughout the war as consultants in directing strategic bombing. Professor von Neumann worked both at Aberdeen Proving Ground and at Los Alamos. Professor Veblen also worked at Aberdeen Proving Ground, and one has but to mention the great contribution of our present Director, J. Robert Oppenheimer.

Many of these men received substantial recognition from the government for their labors through many awards of medals and distinctions. If I have slighted anyone through failure to mention

his name, it was far from intentional but merely an oversight.

There are invited to the Institute for varying periods of the academic year outstanding scholars in various fields of scholarly activity throughout the world, who come to Princeton to cogitate and to develop their thoughts and ideas, the fulfillment of which the busy life of a professor in a university makes impossible.

The Institute is unique. All students already have the degree of Doctor of Philosophy, and many are paid to come to it. They are free to pursue their studies in any way they see fit, with no rules, no classes and no routine for their guidance. Their purpose in coming to the Institute is to pursue work beyond the degree of Doctor of Philosophy, and by research and development in admirable surroundings to benefit mankind. Here it must be noted that with one exception the research does not contemplate the use of laboratories or machines of any kind, but is devoted entirely to the field of human thought. The sole exception is the electronic computer built under the supervision of Dr. von Neumann.

Dr. Flexner retired in 1939 and was succeeded by Dr. Frank Aydelotte, who carried on as Director for the period of eight years, when he in turn retired because of the age limit and was succeeded by the present Director, J. Robert Oppenheimer.

When we were about to erect Fuld Hall, the architect, desirous of getting the feel of the Institute at work, asked me to take him to Princeton, which I did. Our *first* [handwritten note] visit was in Fine Hall, to the quarters of Dr. Einstein. At the time he was before a blackboard filled with equations and in ardent discussion with a student member. Consequently he accepted my introduction to the architect in a rather casual manner. We stayed on quietly for about ten minutes and then left the room. In a few seconds there was a pitter-patter of feet down the corridor and I heard Dr. Einstein calling me and saying, "Did you tell me this was the architect of the new building?" I responded, "Yes." He then said, "Tell him for me that successful institutes are made of brains and not of bricks and mortar." So through the first twenty-five years of its existence the Institute has emphasized brains, and if we may be crowded for space in our buildings which may in some degree be inadequate, we are in large measure "long on brains" and if we continue in the future as we have in the past, the Institute will contribute much to the enlightenment of the world.

Notes

1. Our thanks for their unfailing help to Christine Di Bella, Archivist, and her assistant Erica Mosner, of the Shelby White and Leon Levy Archives Center of the Institute. In the notes that follow, the archive will be referred to as "SWLLAC." Kelly Devine Thomas, Senior Publications Officer, edited our text with care and understanding, for which we are deeply grateful.
2. First presented in a preliminary form as a joint lecture at the Institute, March 25, 2011.
3. The lectures accused universities in America, England, and Germany, in very strong terms, of offering sham courses and degrees; published Flexner 1930, 46, 55, 153–54, etc.

See Flexner's autobiography, 1940, 356; republished and revised as Flexner 1960, 232. The "agents" who approached Flexner were Mr. Samuel D. Leidesdorf (1881–1968), head of one of the most important accounting firms in the United States, who arranged the sale of Bamberger's Department Store to Macy's in 1929, and Herbert H. Maass (1878–1957), a distinguished attorney who specialized in tax law. Both men became influential and long-standing members of the Board of Trustees of the Institute.
4. Flexner had left the General Education Board (NYC), a foundation funded and supported by John D. Rockefeller Jr. of which he had been a cardinal member from 1913 to 1928. The ideas expressed in the lectures lay behind the vision he had been developing for years for "an institution devoted to the central cultural and scientific disciplines [carried out under] conditions in the realm of advanced instruction and research..." See Stern 1964, 10, 721, 726.
5. Flexner drafted a memorandum describing his proposal, which, with some modifications, the Bambergers accepted; Jan. 20, 1930; Stern, Appendix II, 721. Flexner had set down his ideas for what he called "a Modern University" in a memorandum to the General Education Board already in 1921; later published as "The Usefulness of Useless Knowledge," 1939.
6. Flexner 1940, 358.
7. Not to be too imposing, he adds: "Don't bother if it doesn't interest you." Records of the Office of the Director/General Files/Box 9/Bosworth, William Welles, Letter Nov. 7, 1930, SWLLAC.
8. For example, the AT&T building at 195 Broadway, New York City (1921–22), and the Massachusetts Institute of Technology, Cambridge, MA, begun in 1913. There are two important studies of Bosworth's career: Jacobs 1988 and Jarzombek 2004. The historical material on Bosworth given here depends on these sources.
9. See Flexner 1940, 324ff. The two spent a good deal of time together in the Egyptian capitol, and later that year in Paris, Reims, Compiègne, and the French countryside.
10. Bonner 2002, 220.
11. Records of the Office of the Director/General Files/Box 9/Bosworth, William Welles, Letter, Nov. 21, 1930, SWLLAC.
12. We wish to thank the staff of the Rockefeller Archive Center, Sleepy Hollow (formerly North Tarrytown), New York, for supplying us with beautiful, previously unpublished scans of both sides of the medal.

The Reims Cathedral angel was photographed before the restoration of 1925. Interestingly enough, Turin evidently followed the title-page vignette in Paul Vitry's 1919 two-volume photographic documentation of the damage inflicted on the cathedral by a German bomb. Our thanks to Willibald Sauerländer for calling our attention to this fact. The vignette shows a similar view of the angel's head, with the nose intact, in a circular format, signed "Gi." We have not been able to trace the identity of this artist. We also have not found a source for the motif of the "architect at work" on the reverse of the medal.

13. His medal won the competition to commemorate the exhibition. He also worked in Brussels where he became a member of the Académie Royale de Belgique, and later designed coins for Algeria, Indochina, Monaco, and Uruguay. He died in 1968. See Nicolas Maier. *Französische medaillenkunst, French Medallist Art, L'art de la médaille en France, 1870–1940*. Munich, 2010, pp. 341–45.
14. Menten 1972; Hillier 1997.
15. Records of the Office of the Director/General Files/Box 9/Bosworth, William Welles, Letter, Dec. 18, 1930, SWLLAC; see below, discussion of Rule of Three.
16. Records of the Office of the Director/General Files/Box 9/Bosworth, William Welles, Letter, Jan. 19, 1931, SWLLAC.
17. What Flexner calls "intelligible drawings." Records of the Office of the Director/General Files/Box 9/Bosworth, William Welles, Letter, June 6, 1931, SWLLAC. None of the sketches mentioned in these documents have been found.
18. Records of the Office of the Director/General Files/Box 9/Bosworth, William Welles, Letter, June 19, 1931, SWLLAC.
19. Records of the Office of the Director/General Files/Box 9/Bosworth, William Welles, Letter, July 18, 1931, SWLLAC. Ultimately, the design would serve for three types of objects: the Institute seal, the medal, and the bookplate. Although never named by either Flexner or Bosworth, the Art Deco style of the design, by 1930, was considered the height of modernity. See again bibliography in note 14.

The idea to have architecture expressive of the same modern American ideals, "and exercise a beneficial effect on the architectural taste of the community," was thwarted by the Bambergers. They had expected the new institution to be built on their own property in East Orange, NJ. See Stern 1964, 11, and Appendix II, esp. p. 723.

Later, in 1937, Frank Aydelotte, President of Swarthmore College and, at the time, on the Institute Board of Trustees, asked Louis Mumford to suggest the names of four architects who would be possible candidates to build the Institute. Mumford put Frank Lloyd Wright at the top of the list, describing him as "in a class by himself . . . vigorous at sixty-five, at his best only with a completely sympathetic and co-operative client." Records of the Office of the Director/Frank Aydelotte files/Box 1/Architects—1934–1938—IAS, Letter, Nov. 2, 1937, SWLLAC.
20. Records of the Office of the Director/General Files/Box 9/Bosworth, William Welles, Letter, Oct. 15, 1931, SWLLAC. The other two competitors, Dammann and Metcalfe, were paid quittance of 1,500 frs each (less than \$100) for their submissions.
21. The plaster models, which should have been 30 cm in diameter, have not so far turned up.
22. Records of the Office of the Director/General Files/Box 9/Bosworth,

William Welles, Letter, Dec. 4, 1931, SWLLAC. It should be noted that in the process of designing a seal, a coin, or a relatively small medal, the artist first makes a model in relief on a scale at least ten times the size of the projected object, one model for each side for the latter two. The model, in plaster or wax, is then reduced in size mechanically and cast in a hard material. From this form, called a die, the final object is cast in whatever material is chosen. See Jones 1979.

23. Flexner speaks of the need for official stationery since the Institute was generating more and more documents. Bosworth says the appropriate names could be added at the side of the pages in a second run done in the U.S. Records of the Office of the Director/General Files/Box 9/Bosworth, William Welles, Letter, March 8, 1931, SWLLAC.
24. Records of the Office of the Director/General Files/Box 9/Bosworth, William Welles, Bosworth to Flexner, March 14, 1932, SWLLAC. What seems to be a very early impression of the seal appears on the second page of the Minutes of the Board of Trustees, Oct. 13, 1931; it is positioned next to the paragraph in which Turin's commission is documented. Since the minutes predate the emended version in which the word "Establish" was replaced by "Founded," the seal evidently was applied to the page *ex post facto*. See Records of the Board of Trustees/Board Minute Books/Box 1/Volume 1, 1930-1934/October 13, 1931 (p. 2), SWLLAC.
25. Records of the Office of the Director/General Files/Box 9/Bosworth, William Welles, Memorandum, Spring 1932, SWLLAC.
26. Records of the Office of the Director/General Files/Box 9/Bosworth, William Welles, Memorandum, Flexner letter, Nov. 12, 1932, SWLLAC. The Hawley-Smoot tariff agreement was signed into law on June 17, 1930. It raised U.S. tariffs on over 20,000 imported goods to record levels, the second highest in U.S. history, exceeded only (by a small margin) by the Tariff of 1828; see Wikipedia, http://en.wikipedia.org/wiki/Smoot-Hawley_Tariff_Act.
27. Records of the Office of the Director/General Files/Box 9/Bosworth, William Welles, SWLLAC.
28. Records of the Office of the Director/General Files/Box 9/Bosworth, William Welles, Letter, Dec. 9, 1932, SWLLAC.
29. Records of the Office of the Director/General Files/Box 9/Bosworth, William Welles, Letter, Jan. 19, 1933, SWLLAC.
30. He added, "We finally received the detailed statement from M. Turin and have paid him." Letter, Jan. 26, 1933; Library of Congress, Abraham Flexner Correspondence, Box no. 5, 1st folder.
31. The bronze medal illustrated here was struck for the Einstein Centennial year of 1979. The lamp as a symbol of knowledge is said to come from the story of the ancient Greek Diogenes Laërtius with his lantern looking for an [honest] man. The symbolism of laurel (*laurus nobilis*) comes from its ability to resist fire. Its leaves were used in antiquity for the wreath that betokened glory everlasting for superior athletes, statesmen, philosophers, and poets. Levi D'Ancona 1977, no. 86, 201-04.
32. Mr. Bamberger's copy (Fig. 1) in its original leather case is today housed in SWLLAC. Mrs. Fuld's medal is in the possession of Mr. John Bamberger Schindel, Oakland, California.
33. The letters are: Letter, May 5, 1934, Bosworth to Flexner; Letter, May 18, 1934, Flexner to Bosworth; Letter, May 18, 1934, Bosworth to

the Director of the Mint; Letter, May 29, 1934, Flexner to Bosworth, Records of the Office of the Director/General Files/Box 9/Bosworth, William Welles, SWLLAC.

34. Although Turin's design was accepted for the Institute's seal at this time, the bank that handled Institute finances (the Mutual Benefit Life Insurance Company, Newark, NJ), was not so informed and the Institute treasurer continued to use a provisory form of stamp with the name of the Institute arranged in a circle. The discrepancy was recognized only in 1940.

The solution can be observed in the following documents: letters to the Director from the bank's President, John R. Hardin (11/15/1940; Records of the Board of Trustees/Trustees Correspondence/Box 4/Hardin, John R., 1930–1940); to Aydelotte from Walter H. Farrier (Bamberger's personal lawyer, 11/23/1940; Records of the Office of the Director/General Files/Box 21/Farrier, Walter H.); the Minutes of Regular Meeting of the IAS, 02/24/1941 (Records of the Board of Trustees/Minutes/Box 5); letter from Aydelotte to Farrier, 03/22/1941, where the resolution (of 1931) to use the seal designed by Turin is quoted; all documents SWLLAC.

35. See Flexner 1960, x, where Nevins says: "He (Flexner, age 85) had that delight in reading aloud which marks the true lover of style, and many a friend learned that to hear his delivery of Hamlet, or Wordsworth's 'Intimations,' or Keats's 'Grecian Urn,' was to find new values in these immortal classics." Nevins was renowned for his extensive work on the history of the Civil War and his biographies of John D. Rockefeller Sr. as well as such figures as President Grover Cleveland, Hamilton Fish, and Henry Ford.
36. Anne Crawford Flexner, *Aged 26: A Play about John Keats*. New York and London: Oxford University Press, 1937, 77; Opening: Dec 21, 1936. Closing: Jan 1937. For the Titian painting, see below, Fig. 30.
37. In 1937, Erwin Panofsky—the first art historian at the Institute and our teacher at New York University—was invited to give the Mary Flexner Lectures at Bryn Mawr College (Mary was Abraham's sister who graduated from Bryn Mawr in 1895). One of Panofsky's lectures dealt with Titian's painting (Panofsky 1972, 150–69, pls. LIX–LXVIII), and see below.
38. Flexner's request for help with the seal was motivated by more than Bosworth's friendship and talents as a designer of buildings. He had been the adviser of John D. Rockefeller Sr. and Jr. since 1907 when he received the commission to help rebuild their country villa known as Kykuit in Sleepy Hollow, New York. For the next twenty years, he served as their in-house architect and cultural consultant, ultimately becoming a good friend of John Jr. In 1915, he was responsible for obtaining for the Kykuit garden, where it is still on display, a marble sculpture of a nude Aphrodite, attributed to Praxiteles, which was said to have been in the Altoviti Palace in Florence (see Fig. 31). The unsavory story of the acquisition is told in Dalzell and Dalzell 2007, 121–3. Bosworth subsequently sponsored a luxurious, limited edition of a monograph on the sculpture, based on the notes of Charles de Kay (1848–1935), the literary and art critic of the *New York Times* from 1876 to 1894, and cofounder of the Circle of Friends of the Medallion (1909–1915) (de Kay 1920; de Kay had earlier published an article on the sculpture, de Kay 1916). Flexner had turned to the right man.
39. A recent (June 30, 2011), extensive, but far-from-complete survey will be found at: http://en.wikipedia.org/wiki/Ode_on_a_Grecian_Urn
40. Eliot 1972, 270.

41. The alternatives are neatly summarized by Stillinger 1968; on the transcripts, Stillinger 1958, 447f.
42. Spitzer 1955, 203–25.
43. For the ancient Greek tradition: Friedländer 1948, esp. 86f., 124f., Burzachechi 1962 (a very helpful general survey), Steiner 1993 (a reference for which I am indebted to Christopher Jones); Laurens 1989, a comprehensive history of the European epigram tradition. Hagstrum 1958, 17f., 73, 75, 161, considers the locution of Keats's urn under the rubric of "iconic" poetry.
44. Many of the analogies that have been cited are summarized by Jack 1967, 287–9; the tradition has been surveyed more recently by Dawson 1984.
45. On the "Phoenix and the Turtle" and Keats's Ode, see Dawson 1984, 8–39.
46. Excellent overviews of this florescent English antiquarian graphic culture as it relates to Keats's poetry will be found in Jack's study of Keats's profound interest in the visual arts (Jack 1967, esp. 214–24), and in Dickie 1969.
47. On the Sosibios vase, see Grassinger, 1991, 185–5; Hamiaux 1992–8, II, 197–9. The most important contribution concerning Keats and the vase remains that of Wolters 1908, 53–61, followed by Colvin 1917, 416, and facing plate XI, McDermott 1948, 33–4, Jack 1967, 218, 284 n. 22, Machin 1969, Dickie 1969, 104, 105–7, Wilson 1985, 830 n. 12, Motion 1997, 390f. Evidently, Keats knew the engraving of the vase in Piroli 1804–06, II (pl. 22), where Sosibios's signature is transcribed in the text, 51, and a second engraving of the frieze reproduces the signature at the base of an altar flanked by celebrating mythological devotees (pl. 23). The same view of the vase was reproduced in Moses 1814, pl. 38.
48. For the correct transcription of the signature, see Moretti 1968–90, vol. 4, no. 1585. The importance of the signature for Keats has eluded writers on the subject.
49. On Keats's death: Smith 2004.
50. On Keats as the voice of death in the "Ode to a Nightingale," see Hilton 1971, 102.
51. Shaftesbury 1964, I, 90, 94, 268–9. Keats's debt to Shaftesbury has been studied by Solomon 1975.
52. A Discourse Delivered by the President to the Students of the Royal Academy on the Distribution of the Prizes, December 10, 1776 (Wark 1997, 141). On Keats and Reynolds, see Dean 1997, 69–85, esp. p. 80.
53. On Schiller's influence in England, Ewen 1932; on Keats and Schiller, Green 1951; Schiller and the final lines of the Ode, Stahl 1964 and Jack 1967, 287f.
54. Transl. Marianna Wertz:
www.schillerinstitute.org/transl/trans_schil_1poems.html#the_artist
 Die furchtbar herrliche Urania,
 Mit abgelegter Feuerkrone
 Steht sie—als Schönheit vor uns da.
 Der Anmut Gürtel umgewunden,
 Wird sie zum Kind, daß Kinder sie verstehn:
 Was wir als Schönheit hier empfunden,
 Wird einst als Wahrheit uns entgegengehn.
www.textlog.de/schiller-gedichte-die-kuenstler.html

55. Colvin 1891, 41.
56. Colvin 1891, 47.
57. The dual nature of Keats's notion of truth has often been noted (see Albrecht 1978, 225, and the bibliography cited there, n. 2, 240, and Dawson 1984, 105 and n. 5, 148); but, so far as I am aware, this duality has not been extended to beauty, as well, hence the failure to comprehend the underlying sense of the concluding couplet recited by the Grecian urn.
58. The letters are discussed above, pp. 5–8, and reproduced in Appendix B. 1. and 2. Records of the Office of the Director/General Files/Box 9/Bosworth, William Welles, SWLLAC.
59. On personifications in antiquity: Axtell 1907, Shapiro 1993, Cancik and Schneider, eds., 2000, cols. 639–47, Stafford 2000, and 2005; in the *Middle Ages*, Hourihane 2000.
60. Monographic studies of Ripa: Mandowsky 1934, Werner 1977.
61. Reproduced in Jover 2005, 230.
62. Raphael's little painting is thought to be half of the diptych; see Vecchi 1966. On Pilon's sculpture, see the exemplary catalogue essay by Beaulieu 1978, 126–8. For an excellent thematic study of the funerary urns, see Goldberg 1966.
63. On Marcantonio's engraving, a study by Blanc 1863, remains basic.
64. On this ritual, see Giesey 1987, 15–16, 39–47.
65. Lamb 1943, 109.
66. Jex-Blake and Sellers 1982, 193.
67. Panofsky 1930, 173–80 (re-edition by Wuttke ed. 1997). On the theme of two Venuses in antiquity, see Pirenne-Delforge 1988, Koortbojian 1995, 130–2. In certain Greek coins the two goddesses might be shown as twin bifacial profiles (Simon 1970, 6, pl. 1, 4). On *Pandemos* especially, see Stafford 2000, 121–9. Robert Hollander has studied the important role of the concept in Boccaccio, well before its neoplatonic revival in the Renaissance traced by Panofsky; Hollander also provides a valuable exploration of the earlier medieval tradition of the two Venuses (Hollander 1977, 158–60).

Curiously, Panofsky makes no reference to Keats, or to the Institute seal, in two subsequent English discussions of the painting (Panofsky 1969, esp. 110–19, and Panofsky 1972 [first published 1939], 150–60), long after the seal had been adopted. In a letter of July 8, 1933, to a friend describing his current readings of English poets, he mentions Marvell and Donne and Keats, noting that he had heretofore known Keats only by name (Wuttke ed. 2001–08, vol. 1, 624). H. W. Janson, who had studied with Panofsky in Hamburg, wrote in his obituary that Panofsky had once translated Keats as a private diversion (Janson 1969, 156–7), and there is in the archive in Hamburg of William Heckscher, another of Panofsky's students, a German translation by Panofsky of the "Ode on Melancholy" in a dossier dated Summer of 1933. My thanks to Elizabeth Sears for this information, including a transcript of Panofsky's very beautiful translation.

Panofsky discusses a striking and unique but elusive precedent for Titian's symmetrical composition of two unidentified seated female figures, one clothed, the other nude, on the reverse of a famous medal, the first since antiquity, made at the beginning of the fifteenth century, commemorating Constantine the Great. The medal (see Lavin 1993, 2007, Jones 2010) was well known since the early Renaissance and has been suggested as Titian's source. It is not in-

conceivable that the medal was known to the medalist Turin and to Bosworth through his friend de Kay, who was cofounder of the Circle of Friends of the Medallion in New York (1909–15).

The subject and meaning of Titian's picture has long been controversial. The numerous interpretations—which leave inviolate the basic reference to two Venuses—can be followed in Bernardini ed. 1995, 35–51, and Wuttke ed. 1997, 75–6.

68. The formulation is that of Panofsky 1969, 114.

69. On de Kay, see n. 38 above.

70. Truth: *Et lo specchio insegna, che la verità allora, è in sua perfetione, quando, come si è detto, l'intelletto si conforma con le cose intelligibili, come lo specchio è buono quando rende la vera forma della cosa, che vi risplende* (Ripa 1603, 501). Feminine Beauty: *Lo specchio dimostra essere la bellezza femminile medesimamente vno specchio, nel quale vedendo ciascuno se stesso in miglior perfetione per l'amor della specie s'incita ad amarsi in quella cosa, oue si è veduto più perfetto, & poi à desiderarsi, & fruirsi* (Ripa 1603, 42–3).

71. Helpful notes on the history and significance of the Rule of Three may be found at the following URLs:

[http://en.wikipedia.org/wiki/Rule_of_three_\(writing\)](http://en.wikipedia.org/wiki/Rule_of_three_(writing))

[http://en.wikipedia.org/wiki/Rule_of_three_\(mathematics\)#Rule_of_Three](http://en.wikipedia.org/wiki/Rule_of_three_(mathematics)#Rule_of_Three)

72. A touching testimony to Bosworth's comprehension of Flexner's conception of the seal is his citation in a February 10, 1931, letter to Flexner (Records of the Office of the Director/General Files/Box 9/Bosworth, William Welles, SWLLAC), of passages in an address by Charles Moore, then Chairman of the National Commission of Fine Arts, to a meeting of the Association of American Colleges in Washington, January 15, 1930; notably, Bosworth quotes from the published version of the speech, titled "The Arts of Humanism;" Moore's concluding remark after recommending to his academic audience the beauties of the capital city:

When you recognize the orderly and harmonious arrangement of all the elements of the plan of the city and reflect that these elements have their roots deep in the glorious past, in the designs of the world's greatest artists, how can you go away not feeling the inspiration leading you highly to resolve that, in so far as in you lies, you will take the youth committed to your charge along the pathway of beauty that leads to the free realm of truth? (Moore 1930, 130)

73. See the discussion of the play above, pp. 12–13.

74. Flexner 1940, 81f.

75. Flexner 1916 and 1923.

76. Flexner 1930a and b.

77. Flexner 1930a and b, 31; Flexner 1940, 356, 369. In her generally well-documented history of the Institute, Beatrice Stern observed (1964, 127) with some innuendo that Flexner must have read the important and influential book by Thorstein Veblen (1857–1923), *The Higher Learning in America. A Memorandum on the Conduct of Universities by Business Men*, New York, 1918, "and found some of the sociologist's ideas strikingly like his own. He even paraphrased some of the elder Veblen's colorful terms in describing the ills of American universities." (The subtitle of Veblen's book, often omitted in secondary references, and a recent reprint, indicates its virulent social,

economic, and indeed political *parti pris*. Thorstein was the uncle of the mathematician Oswald Veblen, the first professor appointed to the faculty of the Institute, 1932.) Stern gives no specific instances on either of these points, and we have found no references to Thorstein in the publications or documentary materials of Flexner we have examined.

Peter Goddard, Director of the Institute (2004–12), speaking on the proliferation of institutes for advanced study, has provided a number of suggestive parallel readings (Goddard 2011). It should be said, however, that Flexner was complaining about the state of education in America well before Veblen's book was published, and that many of their criticisms echoed those raised in the great educational revolution that led to and continued after the establishment of the first modern American research universities, Johns Hopkins, in 1876, and the University of Chicago in 1890. (On this process, see the fundamental studies by Veysey 1965, Clark 2006, Menand 2001, 255–84.) Veblen and later Flexner had been among the early students at Johns Hopkins and became fervent critics of the academic establishment and its failure to promote truly advanced research. While they held many views in common, their approaches were fundamentally different. Veblen laid all the ills of the university squarely at the feet of business interests promoted by "Captains of Erudition" in their increasingly dominant role as university benefactors and trustees; his brief was primarily social, economic, and, ultimately, political. Flexner was also wary of undue pecuniary interests in academic affairs, but his understanding of the problems generally was intellectual, focused on restructuring or eliminating the stultifying and pernicious legacy of traditional methods and principles of learning, and inadequate provision for advanced study. Among the principles they held in common, perhaps the most distinctive, in my view, is that research in its highest form is motivated by curiosity, a term they both invoked profusely as the ultimate driving force behind disinterested creativity and true innovation.

78. The plethora of pros and cons evinced by Flexner's work throughout his career may be gauged by the systematic bibliography of and about Flexner's publications compiled by Flicker 1963, 251–66.
79. Flexner 1967.
80. Flexner 1968.
81. Flexner 1940, 346 (for the date, see Stern 1964, 2 and n. 2, 40). Flexner reports that at his first meeting with the representatives of Mr. Bamberger and Mrs. Fuld on December 19, 1929, he offered this report, which helped to persuade them, and later the patrons themselves, of the opportunity of creating a new research institute in America. Titled "A Proposal to Establish an American University," the document is preserved in two virtually identical copies, both dated November, in the archive of the Institute and in the Rockefeller Archive Center at Sleepy Hollow, New York. Reproduced here for its seminal role in the history of the Institute, the memorandum is the first record of Flexner's ambition to realize his dream of a new kind of institution (Appendix B. 3.).

Stern (1964, 1–4) gives a different, no doubt more accurate version of the event. Herbert H. Maass, an Institute trustee from the outset and one of the two representatives who had visited Flexner on the patrons' behalf, remarked at a luncheon celebrating the twenty-fifth anniversary of the establishment of the Institute (April 6, 1955), that what Flexner gave them to review at the mid-December meeting were the proofs of the book he was just then completing, compar-

ing American with English and German universities; the book was published in two editions, both in 1930, the first with a preface dated October 1, the second with an added preface dated December 1 (Flexner 1930a and b). Stern refers to Maass's lecture, titled "The Founding and Early History of the Institute," of which a typescript copy is preserved in the Institute archive. The text is reproduced here not only because of its somewhat retributive correction of Flexner's description of his first meeting with the representatives, but because it is the only account of the early history of the Institute, other than Flexner's, by an active participant who was closely involved (Appendix B. 4.). For an important study of the early history, especially the first faculty appointments, see Batterson 2006.

82. Flexner 1937, 1939. Apart from the incongruity of the date, it is curious that Flexner describes the Uselessness essay as a detailed development from the Proposal, which is devoted entirely to the idea of a university, whereas that subject appears in the essay only briefly as the description of the Institute at the end. Another, somewhat different, evidently separately printed version of the essay is preserved in the Institute archive, which notes the Bryn Mawr lecture and publication, and its delivery at the inauguration of the Squibb Institute for Medical Research at Lawrenceville, New Jersey, in 1938, and its publication in the proceedings of the inauguration, Flexner 1938. A summary of the event and Flexner's lecture appeared in the *Journal of the National Medical Association*, 1938 ("Opening..." 1938).
83. Flexner 1928.
84. Fry 1919, 1920. The portrait, 1930–32, is reproduced by Shone 1999, 230, no. 141.
85. Chandrasekhar, the Nobel laureate in physics, in his volume on *Truth and Beauty: Aesthetics and Motivations in Science*, speaks of Roger Fry and cites Keats's verses—without reference to the Institute or its seal, although he was a visiting Member of the Institute on more than one occasion (1987, 5, 7).
86. Flexner (James Thomas) 1984, 437.
87. On the history of the research seminar-institute, see the excellent chapter in Clark 2006, 141–82.
88. Stern 1964, 51, 55, 724, 726, 731.
89. Lavin 1983.
90. Borel 1983.
91. Jex-Blake and Sellers 1982, 126–7; Vatican statue from the Albacini collection, reproduced in *Lexicon iconographicum* 1981–1999, 2, prt. 1, p. 76, no. 667; prt. 2, p. 66, fig. 667.
92. Sutton 1984, 43, 46, and Fig. 7, Necklace, East Mediterranean, early seventh century; length 83 cm, height of pendant (without chains) 4.5 cm. Reportedly from Egypt. Dumbarton Oaks Collection, Acc. no. 28.6. See also the sculpture group: *Venus Anadyomene*: fourth–fifth centuries A.D., Musée du Louvre. Found in 1843, at the Roman villa of Petit-Corbin, near St-Georges-de-Montagne (Dept. of Gironde).
93. The relief by Antonio Lombardo (Victoria and Albert Museum, London, 40.6 x 25.1 cm) is inscribed at the bottom with a Latin phrase, the last pentameter of Ovid's *Art of Love*, saying: "Nude Venus wrings spray from her hair." It is part of a series of small Venetian mythological reliefs thought to date 1510–1515. See Schulz 1998, pp. 70–72, fig. 44.

94. Maier 2010, p. 219.
95. See Valeriano Bolzani 1556, 206.
96. Jover 2005, p. 231.
97. Boardman 1985, 222.
98. This figure is full length, with flowing drapery below the waist. She is part of a series of figures allegorizing the four elements of Earth, Air, Fire, and Water done by C. Paul Jennewein, for the Department of Justice Program: Treasury Section of Fine Arts; the sculptures are located on the fifth floor of the building, outside the Law Library. I am deeply indebted to Diane Tepfer and Alex Lapp for identifying this sculpture for me. See Howarth 1980, fig. 203.
99. The Apollo is recorded in the courtyard of the Palazzo Sassi in Rome in the sixteenth century and is now in Naples in the Archaeological Museum; see Bober 1957, 71. The Vatican *Ariadne* is a Roman Hadrianic copy of a Hellenistic original of the Pergamon School of the second century B.C.E.; see Ridgway 2001, 330–32.
100. The Caryatid, fifth century B.C.E., now in the British Museum, London, is from the Erechtheion on the Acropolis, Athens, Greece.

List of Illustrations

- Figure*
- 1 Pierre Turin, Medal of the Institute for Advanced Study, obverse, 1934. SWLLAC
 - 2 Portrait of Abraham Flexner. SWLLAC
 - 3 Louis Bamberger. Photo: Dobkins, 1517 Boardwalk, Atlantic City, New Jersey
 - 4 Caroline (Carrie) Bamberger Fuld. SWLLAC
 - 5 Anne Crawford Flexner. Photo: White, New York
 - 6 William Welles Bosworth. (*Brickbuilder*, 2, 1915. p. 102)
 - 7 John D. Rockefeller Jr., ca. 1920. Photo courtesy of Rockefeller Archive, Sleepy Hollow, New York
 - 8 Pierre Turin, Medal awarded to Rockefeller by the Commission des Monuments Historiques, reverse and obverse, 1929. Photo courtesy of Rockefeller Archive, Sleepy Hollow, New York
 - 9 Angel of the Annunciation, detail, stone. Reims Cathedral
 - 10 Pierre Turin, archival photo. CAEF: Fonds des monnaies et médailles (Za-B1)
 - 11 Pierre Turin, Exposition Bronze Medal, 1925. (Maier 2010, Fig. 322)
 - 12 Paul-Marcel Dammann, *Electrification of Paris, 1907–13*, ca. 1930, bronze. (Maier 2010, Fig. 319)
 - 13 Percy Metcalfe, Coin of George V, obverse, 1924. Victoria and Albert Museum, London
 - 14 Shields of Harvard, Yale, and Princeton
 - 15 Seal of the Institute for Advanced Study, 4 cm in diameter, embossed imprint on p. 2 of the Minutes of the Board of Trustees meeting, October 13, 1931
 - 16 Pierre Turin, Bookplate of the Institute for Advanced Study, 1932. SWLLAC
 - 17 Joseph Severn, *Portrait of John Keats*, 1816, charcoal. National Portrait Gallery (D20019), London
 - 18 Joseph Severn, self-portrait, pencil. National Portrait Gallery (3091), London
 - 19 IAS Commemorative Medal, reverse, 1979, bronze cast. Engraved for Einstein Centennial 1879–1979
 - 20 Attributed to John Keats, drawing after the Sosibios vase. John Keats House, Rome

- 21 Tommaso Piroli, Sosibios vase, whole and detail of Dionysian ceremonies frieze, engravings. (Colvin 1891, pl. XI; Piroli 1804–06, II, pls. 22, 23)
- 22 Sosibios urn, front and back, marble. Musée du Louvre, Paris
- 23 Cesare Ripa, *Verità*, woodcut. (Ripa 1603, 500)
- 24 Cesare Ripa, *Bellezza*, woodcut. (Ripa 1603, 41)
- 25 Jean Auguste Ingres, *Venus Anadyomene*, oil on canvas, 164 x 92 cm. Musée Condé, Chantilly
- 26 Raphael Sanzio, *The Three Graces*, 1504–05, oil on panel, 17 x 17 cm. Musée Condé, Chantilly
- 27 Peter Paul Rubens, *The Three Graces*, 1630–35, oil on wood, 221 x 181 cm. Museo del Prado, Madrid
- 28 Germain Pilon, Graces supporting the urn for the heart of King Henry II, 1560, marble and metal, 150 cm. Musée du Louvre, Paris
- 29 Marcantonio Raimondi, after Raphael, Censer for the funerary urn of Francis I, engraving
- 30 Titian, *Sacred and Profane Love*, 1514, oil on canvas, 118 x 279 cm. Galleria Borghese, Rome
- 31 Altoviti Aphrodite. Kykuit, Rockefeller Estate, Sleepy Hollow, New York
- 32 Albrecht Dürer, *The Temptation*, engraving
- 33 Roger Fry, self-portrait, 1930–34, 59.7 x 49.5 cm. National Portrait Gallery, London
- 34 Armand Borel, snapshot photograph
- 35 *Venus Anadyomene*, Roman. Vatican Museum (807), Rome
- 36 Pendant, lapis lazuli and gold, seventh century, Near Eastern. Dumbarton Oaks, Washington, DC
- 37 Antonio Lombardo, *Venus Anadyomene*, marble relief, ca. 1510–15. Victoria and Albert Museum (A.19-1964), London
- 38 Frédéric-Charles-Victor de Vernon, *Eve and the Snake*, bronze plaque, 80 x 30 mm. Whereabouts unknown. (Maier 2010, Fig. 1905)
- 39 Piero del Pollaiuolo, *Prudence*, 1470. (one of a series of virtues.) Galleria degli Uffizi, Florence
- 40 *Water Bearers*, marble relief, fifth century B.C.E. North Frieze, Parthenon, Athens
- 41 Ingres, *La Source*, 1856, oil on canvas. Musée d'Orsay, Paris
- 42 C. Paul Jennewein, *Allegory of Water*, detail. Department of Justice, Washington, DC. (Howarth, 203)
- 43 *Apollo with his Lyre*. Archaeological Museum (6262), Naples

- 44 *Sleeping Ariadne*. Hadrianic copy of Hellenistic original. Vatican Museum, Rome
- 45 Caryatid. Erechtheion, Acropolis, Athens, Greece. British Museum, London
- 46 Mycerinus and Hathor, detail. Egyptian National Museum, Cairo
- 47 Marcantonio Raimondi, detail of Fig. 29
- 48 Germain Pilon, detail of Fig. 28
- 49 Pierre Turin, detail of Fig. 1
- 50 Pierre Turin, *Repatriation of Belgian Prisoners of War*, 1945, 68 mm. Private collection
- 51 Pierre Turin, International Exhibition of Art and Technology, 1937, 68 mm. (Maier 2010, Fig. 328)
- 52 Pierre Turin, Société Générale Alsacienne de Banque, ca. 1932, 100 mm. (Maier 2010, Fig. 325)
- 53 Pierre Turin, *Porteuse de fleurs*, 1926, 39 mm. (Maier 2010, Fig. 323)
- 54 Pierre Turin, *Nymph*, 1932, 39 mm. (Maier 2012, Fig. 326)
- 55 Pierre Turin, *Printemps*, 1925, 65 mm. (Maier 2010, Fig. 321)
- 56 Pierre Turin, Compagnie Continentale Edison, ca. 1932, 53 x 73 mm. (Maier 2010, Fig. 327)

Bibliography

- Albrecht, William Price. "Keats's 'Truth' and 'A Truth.'" *Philological Quarterly* LVII (1978): 225–44.
- Axtell, Harold Lucius. *The Deification of Abstract Ideas in Roman Literature and Inscriptions*. Chicago, 1907.
- Babelon, Jean. "Médailleurs Contemporains: Pierre Turin." *Arethuse: revue trimestrielle d'art* 3 (1926): 77–80.
- Batiffol, Pierre. *Histoire du Bréviaire Romain*. 3rd ed. Paris, 1911.
- Batterson, Steve. *Pursuit of Genius: Flexner, Einstein, and the Early Faculty of the Institute for Advanced Study*. Wellesley, MA, 2006.
- Beaulieu, Michèle. *Description raisonnée des sculptures du Moyen Âge, de la Renaissance, et des temps modernes*. Vol. 2, *Renaissance française*. Paris, 1978.
- Blanc, Charles. "L'Oeuvre de Marc-Antoine." *Gazette des Beaux-Arts* XIV (1863): 268–275.
- Boardman, John. *The Parthenon and its Sculptures*. Austin, 1985.
- Bober, Phyllis Pray, ed. *Amico Aspertini: Drawings after the Antique; Sketchbooks in the British Museum*. London, 1957.
- Bonner, Thomas Neville. *Iconoclast: Abraham Flexner and a Life in Learning*. Baltimore and London, 2002.
- Borel, Armand. "Mathematics: Art and Science." *The Mathematical Intelligencer* V (1983): 8–17.
- Bullen, J. B., ed. *Roger Frey, Vision and Design*. London, 1981.
- Burzachechi, Mario. "Oggetti parlanti nelle epigrafi greche." *Epigraphica: Rivista italiana di epigrafia* XXIV (1962): 3–54.
- Cancik, Hubert, and Helmut Schneider, eds. *Der neue Pauly: Enzyklopädie der Antike: Altertum* IX. Stuttgart and Weimar, 2000, cols. 639–647.
- Chandrasekhar, Subrahmanyan. *Truth and Beauty: Aesthetics and Motivations in Science*. Chicago and London, 1987.
- Clark, William. *Academic Charisma and the Origins of the Research Institute*. Chicago and London, 2006.
- Colvin, Sidney, ed. *Letters of John Keats to his Family and Friends*. New York, 1891.
- . *John Keats. His Life and Poetry. His Friends, Critics, and After Fame*. New York, 1917: 416 and facing plate XI.
- Dalzell, Robert F., Jr., and Lee Baldwin Dalzell. *The House the Rockefellers Built: A Tale of Money, Taste, and Power in Twentieth-Century America*. New York, 2007.
- Dawson, William Parrish. "Beauty is Truth: The Tradition and Keats's 'Ode on a Grecian Urn.'" Ph.D. diss., University of Missouri–Columbia, 1984.
- Dean, Dennis R. "Some Quotations in Keats's Poetry." *Philological Quarterly* LXXVI (1997): 69–85.
- de Kay, Charles. "The Altoviti Venus: An Aphrodité Attributed to Praxiteles." *The Art World* I (1916): 112–113, 115–118.

- . *The Altoviti Aphrodite*. Compiled and edited from information and notes furnished by Charles de Kay. Privately printed, copyright by William Welles Bosworth. Baltimore, 1920.
- Dickie, James. "The Grecian Urn: An Archaeological Approach." *Bulletin of the John Rylands Library* LII (1969): 96–114.
- Eliot, T. S. "Dante." *Selected Essays*. London, 1972.
- Ewen, Frederic. *The Prestige of Schiller in England, 1788–1859*. New York, 1932.
- Flexner, Abraham. *Abraham Flexner: An Autobiography*. Introduction by Allan Nevins. New York, 1960.
- . *The American College: A Criticism*. New York, 1908 (reprinted 1969).
- . *The Burden of Humanism*. The Taylorian Lecture 1928. Oxford, 1928.
- . "A Freshman at Nineteen." *Educational Review* XVIII (1899): 353–62.
- . *I Remember. The Autobiography of Abraham Flexner*. New York, 1940.
- . *A Modern College, and a Modern School*. Garden City, NY, 1923.
- . "A Modern School." *The American Review of Reviews* LIII (1916): 465–474.
- . *A Modern School*. Publications of the General Education Board. Occasional Papers, no. 3. New York, 1916.
- . *A Modern School*. Publications of the General Education Board. Occasional Papers, no. 3. New York, 1923.
- . *Universities, American, English, German*. Preface dated October 1, 1930. New York, 1930.
- . *Universities, American, English, German*. Second Preface dated December 1, 1930. New York, 1930.
- . *Universities: American, English, German*. Introduction by Robert Ulich. New York, 1967.
- . *Universities: American, English, German*. Introduction by Clark Kerr. London and New York, 1968.
- . "The Usefulness of Useless Knowledge." Commencement address, Bryn Mawr College, June 2, 1937. In *Bryn Mawr Alumnae Bulletin* (July 1937): 2–6.
- . "The Usefulness of Useless Knowledge." *The Field and the Work of the Squibb Institute for Medical Research* I (1938): 19–23.
- . "The Usefulness of Useless Knowledge." *Harper's Magazine*, no. 179 (1939): 544–72.
- Flexner, James Thomas. *An American Saga: The Story of Helen Thomas and Simon Flexner*. Boston, 1984.
- Flicker, Bernard. "Abraham Flexner's Educational Thought and its Critical Appraisal." Ph.D. diss., New York University, 1963.
- Friedlander, Paul. *Epigrammata: Greek Inscriptions in Verse from the Beginnings to the Persian Wars*. Berkeley, 1948.
- Fry, Roger. "Art and Science." *The Athenaeum*, June 6, 1919, 434f.
- . *Vision and Design*. London, 1920.

- Giesey, Ralph E. *Le roi ne meurt jamais: les obseques royales dans la France de la Renaissance*. Translated by D. Ebnother. Paris, 1987.
- Goddard, Peter. "Growth of Institutes for Advanced Study." Lecture, Center for Advanced Studies, State University of Campinas, São Paulo, Brazil, March 23, 2011.
- . "Houses of Refuge and Entertainment: Why Are Institutes for Advanced Study Proliferating?" Informal talk, Institute for Advanced Study, Princeton, NJ, February 14, 2011.
- Goldberg, Victoria L. "Graces, Muses, and Arts: The Urns of Henry II and Francis I." *Journal of the Warburg and Courtauld Institutes* XXIX (1966): 206–18.
- Grassinger, Dagmar. *Römische Marmorkrater*. Mainz am Rhein, 1991.
- Green, David Bonnell. "Keats and Schiller." *Modern Language Notes* LXVI (1951): 537–40.
- Hagstrum, Jean H. *The Sister Arts: The Tradition of Literary Pictorialism and English Poetry from Dryden to Gray*. Chicago, 1958.
- Hamiaux, Marianne. *Musée du Louvre. Les sculptures grecques*. 2 vols. Paris, 1992–1998.
- Hillier, Bevis. *Art Deco Style*. London, 1997.
- Hilton, Timothy. *Keats and his World*. London, 1971.
- Hollander, Robert. *Boccaccio's Two Venuses*. New York, 1977.
- Hourihane, Colum, ed. *Virtue and Vice. The Personifications in the Index of Christian Art*. Princeton, 2000.
- Howarth, Shirley Reiff. *C. Paul Jennewein, Sculptor*. Tampa, 1980.
- Jack, Ian. *Keats and the Mirror of Art*. Oxford, 1967.
- Jacobs, S. Quentin. "William Welles Bosworth: Major Works." Master's Thesis, Columbia University, 1988.
- Janson, Horst Waldemar. "Erwin Panofsky 1892–1968." *The American Philosophical Society Year Book* (1969): 151–60.
- Jarzombek, Mark. *Designing MIT: Bosworth's New Tech*. Boston, 2004.
- Jex-Blake, Katherine, and Eugenie Sellers. *The Elder Pliny's Chapters on the History of Art*. Chicago, 1982.
- Jones, Mark. *The Art of the Medal*. London, 1979.
- . *A Catalogue of the French Medals in the British Museum*, 1, A.D. 1402–1610. London, 1982.
- . "The First Cast Medals and the Limbourgs, the Iconography and Attribution of the Constantine and Heraclius Medals." *Art History* 2 (1979): 35–44.
- Jones, Tanja J. "The Constantine and Heraclius Medallions. Pendants Between East and West." *The Medal* 56 (2010): 5–13.
- Jover, Manuel. *Ingres*. Paris, 2005.
- Koortbojian, Michael. *Myth, Meaning, and Memory on Roman Sarcophagi*. London, 1995.
- Lamb, Walter Rangeley Maitland. *Plato*, vol. V: *Lysis, Symposium, Gorgias*. Cambridge, MA, and London, 1943.
- Laurens, Pierre. *Labeille dans l'ambre: celebration de l'epigramme de l'epoque alexandrine a la fin de la Renaissance*. Paris, 1989.
- Lavin, Irving. "The Art of Art History." *ARTnews* LXXXII (1983): 96–101.

- . "Michelangelo, Mosè e il 'papa guerriero.'" In *Il ritratto nell'Europa del Cinquecento*. Atti del Convegno (Firenze, 7–8 Novembre 2002), Aldo Galli, et al., eds., 199–215. Florence, 2007.
- . "Pisanello and the Invention of the Renaissance Medal." In *Italianische Frührenaissance und nordeuropäisches Mittelalter. Kunst der frühen Neuzeit im europäischen Zusammenhang*, Joachim Poeschke, ed., 67–84. Munich, 1993.
- Levi D'Ancona, Mirella. *The Garden of the Renaissance: Botanical Symbolism in Italian Painting*. Florence, 1977.
- Lexicon iconographicum mythologiae classicae (LIMC)*. eds. Hans Christoph Ackermann, Jean-Robert Gisler. 9 vols. Zürich, 1981–1999.
- Machin, Noel. "The Case of the Empty-Handed Maenad." *The Observer, Sunday Colour Magazine*, February 18, 1969, 11ff.
- Maier, Nicolas. *Französische Medaillenkunst; French medallic art; L'art de la médaille en France, 1870–1940*. Munich, 2010.
- Mandowsky, Erna. *Untersuchungen zur Iconologie des Cesare Ripa*. Hamburg, 1934.
- McDermott, William C. "Keats and Sosibios." *The Classical Journal* XLIV (1948): 33–4.
- Meiss, Millard. *French Painting in the Time of Jean de Berry*. New York, 1974.
- Menand, Louis. *The Metaphysical Club*. New York, 2001.
- Menten, Theodore. *The Art Deco Style in Household Objects, Architecture, Sculpture, Graphics, Jewelry*. Dover, 1972.
- Moore, Charles. "The Arts of Humanism." *The American Magazine of Art* XXI (1930): 125–30.
- Moretti, Luigi. *Inscriptiones Graecae urbis Romae*. 4 vols. Rome, 1968–90.
- Moses, Henry. *A Collection of Antique Vases, Altars, Pateræ, Tripods, Candelabra, Sarcophagi, &c. from Various Museums and Collections, Engraved on 170 Plates*. London, 1814.
- Motion, Andrew. *Keats*. London, 1997.
- "Opening of the Squibb Institute for Medical Research." *Journal of the National Medical Association* 30:4 (1938): 151–3.
- Panofsky, Erwin. *Hercules am Scheidewege und andere antike Bildstoffe in der neueren Kunst*. Berlin, 1930.
- . *Problems in Titian, Mostly Iconographic*. New York, 1969.
- . *Studies in Iconology. Humanistic Themes in the Art of the Renaissance*. Oxford, 1972.
- Pirenne-Delforge, Vinciane. "Épithètes culturelles et interprétation philosophique. À propos d'Aphrodite Ourania et Pandémos à Athènes." *L'Antiquité Classique* LVII (1988): 124–57.
- Pirolì, Tommaso. *Les monumens antiques du Musée Napoleon*. 4 vols. Paris, 1804–06.
- Ridgway, Brunilde Sismondo. *Hellenistic Sculpture: The Styles of ca. 331–200 B.C.* Madison, 2001.
- . *Roman Copies of Greek Sculpture: The Problem of Originals*. Ann Arbor, 1984.
- Ripa, Cesare. *Iconologia, ovvero Descrittione di diverse imagini cauate dall'antichità, & di propria inuentione*. Rome, 1603.

- Scher, S. K. "Gothic, Renaissance, and Baroque Medals from the Museum of Fine Arts, Boston." *The Medal* 9, special issue, 1986.
- Schulz, Anne Markham. *Giammaria Mosca called Padovano*. University Park, 1998.
- Shaftesbury, Anthony Ashley Cooper, Earl of. *Characteristics of Men, Manners, Opinions, Times*. Edited by John M. Robertson. 2 vols. Indianapolis, IN, 1964.
- Shapiro, Harvey Alan. *Personifications in Greek Art. The Representation of Abstract Concepts, 600–400 B.C.* Zürich, 1993.
- Shone, Richard. *The Art of Bloomsbury*. Princeton, 1999.
- Simon, Erika. "Aphrodite Pandemos auf attischen Münzen." *Schweizerische numismatische Rundschau* 1L (1970): 5–24.
- Smith, Hillas. "The Strange Case of Mr. Keats's Tuberculosis." *Clinical Infectious Diseases* XXXVIII (2004): 191–3.
- Solomon, Harry M. "Shaftesbury's Characteristics and the Conclusion of 'Ode on a Grecian Urn.'" *Keats-Shelley Journal* XXIV (1975): 89–101.
- Spitzer, Leo. "The Ode on a Grecian Urn: or Content vs. Metagrammar." *Comparative Literature* VII (1955): 203–25.
- Stafford, Emma. *Worshipping Virtues: Personification and the Divine in Ancient Greece*. London, 2000.
- . and Judith Herrin, eds. *Personification in the Greek world. From Antiquity to Byzantium*. Aldershot, UK, and Burlington, VT, 2005.
- Stahl, E. L. Letter to the editor. *The Times Literary Supplement*, March 19, 1964, 238.
- Steiner, Deborah. "Pindar's 'Oggetti Parlanti.'" *Harvard Studies in Classical Philology* XCV (1993): 159–180. www.jstor.org/stable/311381
- Stern, Beatrice M. *A History of the Institute for Advanced Study 1930–1950*. Typescript manuscript. Institute for Advanced Study Library, 1964.
- Stillinger, Jack, "Appendix: Who Says What to Whom at the End of Ode on a Grecian Urn?" In *Twentieth Century Interpretations of Keats's Odes: A Collection of Critical Essays*, Jack Stillinger, ed., 113f. Englewood Cliffs, NJ, 1968.
- . "Keats's Grecian Urn and the Evidence of the Transcripts." *PMLA* LXXIII (1958): 447f.
- Sutton, Denys, ed. *Dumbarton Oaks*, Washington, DC, 1986, Cyril Mango, "The Byzantine Collection," 39–52 (originally published in *Apollo*, 119, no. 266, 1984)
- Valeriano Bolzani, Piero (1477–1558). *Hieroglyphica sive de sacris Aegyptiorum litteris commentarii*. Basel, 1556.
- Vecchi, Pierluigi de. *L'Opera complete di Raffaello*. Milan, 1966.
- Veysey, Laurence R. *The Emergence of the American University*. Chicago, 1965.
- Vitry, Paul. *La cathédrale de Reims, architecture et sculpture*. Paris, 1919.
- Wark, Robert R., ed. *Sir Joshua Reynolds: Discourses on Art*. New Haven, 1997.

- Weiss, Roberto. "The Medieval Medallions of Constantine and Heraclius." *Numismatic Chronicle* 3 (1963): 129–44.
- Werner, Gerlind. *Ripa's Iconologia. Quellen, Methode, Ziele*. Utrecht, 1977.
- Wilson, Douglas B. "Reading the Urn: Death in Keats's Arcadia." *Studies in English Literature, 1500–1900* XXV (1985): 823–44.
- Wolters, Paul. "Keats's Grecian Urn." *Archiv für das Studium der neueren Sprachen und Literaturen* CXX (1908): 53–61.
- Wuttke, Dieter, ed. *Erwin Panofsky. Hercules am Scheidewege: und andere antike Bildstoffe in der neueren Kunst*. Berlin, 1997.
- . *Erwin Panofsky. Korrespondenz 1910 bis 1968*. 5 vols. Wiesbaden, 2001–08.

