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The good, bad, and ugly in architectural case studies

Abstract

This paper describes the results of an academic assignment given to a group of undergraduate architectural design students, in which each student was required to conduct research and compose case-study reports on selected works of architecture to support individual identification of each of these works as "good", "bad", or "ugly". Each student was free to select whichever works of architecture they wished as subjects for their research, and to illustrate these works by whatever means they found appropriate. Each student selected several buildings as examples, and each student composed a multi-page illustrated and written report summarizing their research and concluding with specific attributions for each selected work.

Tabulated results of the assignment indicate that the student group as a whole tended strongly to employ exterior photographic images in their reports, regardless of the value attribution assigned to specific works of architecture; that there was a strong tendency for students to fail to credit architects for works of architecture deemed "bad" or "ugly", and that students tended more strongly to credit architects for "good" works of architecture; that students almost completely forsook the use of graphical information in the reports other than photographs; and that there was an exceptionally strong tendency for students to fail to credit sources for images used in their reports.

In aggregate, these results suggest to us that students overwhelmingly treat the outward appearance of a work of architecture as the primary means of judging its value; and particularly, that students consider photographs to be both the ultimate point of reference for a given work of architecture, as well as neutral (unbiased) substitutes for those works. In short, students appear reluctant, unwilling, or unable to develop understandings of the "tangible speculation" (Graves, 1977) present in any successful mediating architectural artifact, such as a photograph.

The paper concludes with suggestions regarding how students of architecture might be encouraged to develop deeper understandings of mediating architectural artifacts, and hence of architecture itself, through their production of case-study reports. Specific techniques are outlined, including the possibility of generating new mediating artifacts (such as cross-sections) from photographs.

Key Words: *architecture, case study, media, research methods*

Introduction

This paper describes the results of an academic assignment given to a group of second-year undergraduate architectural design students at a North American university, in which each student was required to conduct research and compose case-study reports on selected works of architecture to support individual identification of each of these works as "good", "bad", or "ugly". The introductory-level assignment discussed in this paper was offered to students with the intention that it would provide them with practice identifying qualitative attributes of existing architecture, and subsequently forming conclusions about the design value present in that architecture.

In this paper, we chose not to focus on the pedagogical aspects of establishing and developing a normative theory for design value. Rather, our interest here is in exploring the consequences which follow the articulated *promise* of such a theory: specifically, after the students implicitly accept by engaging in the assignment that such a normative theory is tenable, how do they go about researching, establishing grounds for conclusions, and providing "evidence" in support of their conclusions?

Assignment

Students were required, over a fixed time period, to conduct research and compose case-study reports on selected works of architecture to support individual identification of each of these works as "good", "bad", or "ugly". In responding to the assignment, each student was free to select whichever works of architecture they wished as subjects for their research, and to illustrate these works by

whatever means they found appropriate. Each student selected several buildings as examples, and each student composed a multi-page illustrated and written report summarizing their research and concluding with specific attributions for each selected work. Reports were submitted in printed and digital forms (either PDF or ppt).

Description of the sample

The sample considered here is the result of the combined work of 15 students. The students' submitted reports each contained 16 pages on average (the shortest report consisted of 4 pages and the longest of 29 pages). The total sample, which is an aggregate of all images in the entire set of reports, consists of 420 images, of which the vast majority are photographs.

In our sample, we tabulated:

- the attributions of value ("good", "bad", or "ugly") assigned by individual students to individual works of architecture;
- the factors which individual students cited in support of specific attributions of value (e. g., "appearance," "views from within");
- attributes of specific images in the reports, such as its medium (drawing, photograph, etc.), its type related to content (e. g., interior, exterior, etc.), and whether a specific image was properly credited to its source;
- attributes of specific works of architecture analyzed by the students, such as whether a specific work was properly credited to its author (the architect).

Our analysis of the sample supports four related observations: first, that students almost completely forsook the use of graphical information in the reports other than photographs; second, that the student group as a whole tended strongly to employ exterior photographic images in their reports, regardless of the value attribution assigned to specific works of architecture; third, that there is a strong relationship between value attribution and the likelihood that a designer is credited by the student (specifically, that students tend to fail to credit architects for works of architecture deemed "bad" or "ugly", and that they tend to credit architects for "good" works of architecture); and finally, that there was an exceptionally strong tendency for students to fail to credit sources for images used in their reports.

Tendency to rely exclusively on photographs

Roger Clark and Michael Pause establish the relevance of existing architecture in support of design through the use of a taxonomically organized collecting of selected architectural works (Clark & Pause, 1985). The importance of their work is that it focuses a specific way of constructing knowledge of existing work which requires the creation of new mediating artifacts, such as plans, sections, and diagrams. However, their establishment *a priori* of artifactual categories denies the possibility that a given work of architecture might stimulate a way of seeing, or a kind of artifact, which was specific to itself (not pre-determined). As a counterpoint to this approach, Norman Crowe and Steven Hurtt acknowledge that "visual notations and analytical sketches [i. e., mediating artifacts constructed to make sense of existing architecture] are very much like the kinds of drawings that one makes in the design process itself." (Crowe & Hurtt, 1986: 12.) The authors recognize the parallels between constructing knowledge of existing architecture and of imagined architecture. It is not, however, that the one is simply practice for the other; each one constitutes a specific instance of a larger cyclical process: that is, precisely what Michael Graves (Graves, 1977) acknowledges as the iterative function present in all successful mediating artifacts, or what David Leatherbarrow establishes as the possibility of artifacts to direct conception into construction (Leatherbarrow, 1998).

Our sample indicates a strong preference for students to rely on photographs of existing architecture in support of value attributions:

total images in sample	420
of these, how many are drawings	3
expressed as a percent	<1%

Table 1. Drawings as percentage of the sample.

The sample illustrates a near-complete failure to address architectural imagery other than photographs (as shown for example in the work of Clark & Pause). A possible though unverified

explanation for the prevalence of photographs in the reports is that the students gathered imagery from Internet sources which feature photographs almost exclusively, such as Flickr, or to a lesser degree, Google Image. Generally, the possibility that students will treat a case-study assignment as an opportunity to gather information rather than to critically engage their findings will be intensified (made more likely) whenever the structure of a mode of inquiry is designed to compartmentalize thought. When Flickr or Google Image are considered as information-organization media, it is obvious that they are transparently structured as frameworks for the distribution and consumption of downloadable files: that is, of discrete, format-specific items. This implies that as students rely on these websites, the results of their work will exist as collections of individual objects – an possibility which is perpetuated by the subsequent use of "page-layout software" or "presentation software" to package study reports for submittal.

Unfortunately, students' failure to credit images (see a following section of this paper) makes it impossible to verify the actual sources of their imagery. However, even if it were conclusively shown to be true that (1) students primarily rely on image-rich Internet sources in the production of their reports, and (2) that these sources do in fact consist of higher percentages of photographs relative to other kinds of architectural images, the students' almost-complete reliance on photographs suggests that they are quite willing to allow photographs, *regardless of their source,* to constitute near-exclusive evidence in support of value judgments. In other words, that the students consider photographs to establish an unambiguous point of reference for a given work of architecture, or that photographs constitute what Cheryl Finley has called "the leading authenticating action" (Finley, 2004: 121) undertaken by tourists visiting highly charged sites. (This in turn suggests a provocative question, not explored in detail here: *Are students' practices of gathering information for case-study reports from Internet sites analogous to the practices of tourists at highly-charged physical sites?*)

Tendency to employ exterior images regardless of value attribution

The sample shows a strong tendency for students to choose exterior (outside) photographic views:

total images in sample	420
of these, how many are exterior photographs	362
expressed as a percent	86%

Table 2. Exterior images as percentage of the sample.

The students' preference for exterior images further supports the idea that the students assume such images to be neutral frames around the subject of their inquiry (the work of architecture) and thus constitute obvious evidence in support of their own conclusive judgments, however these judgments are argued and to whatever conclusion. Were more interior images present in the final reports, the implication would be less clear; looking through architecture (i. e., as is possible in an interior image) would in that case be expected to have an impact on student judgments comparable to the impact of looking at architecture. The implication that students tend not to consider the ability of architecture to structure views from within, when forming a judgment of its value, is also supported by their general failure to credit "views from within" as a factor supporting such judgments:

total number of references to factors in support of a particular attribution of value:	579
of these, how many references are to "views from within" as a factor:	9*
expressed as a percent	1.5%

Table 3. Frequency of citing "views from within" as a factor.

* 6 of which supported attributions of "good"; 2 of which supported "bad"

Moreover, of the reasons cited in favor of any judgment, no factor was cited more often than "appearance":

total number of references to factors in support of an attribution of "good":	248
of these, how many references are to "appearance" as a factor:	45
expressed as a percent	18%

total number of references to factors in support of an attribution of "bad":	173
of these, how many references are to "appearance" as a factor:	58
expressed as a percent	34%

total number of references to factors in support of an attribution of "ugly":	158
of these, how many references are to "appearance" as a factor:	64
expressed as a percent	41%

Tables 4a, 4b, 4c. Frequency of citing "views from within" as a factor.

A reasonable conclusion is that students overwhelmingly treat the outward appearance of a work of architecture, *as mediated and understood through photographic images,* as the primary means of judging the value of that architecture (whether good, bad, or ugly). Not to discount the importance of factoring in "appearance" while judging architectural value, the approach illustrated here nevertheless is unsustainable precisely because it requires that images operate as neutral registers of architectural content. This *false assumption of neutrality* on the part of the students occurs despite widely accepted academic agreement that photography is in fact not an ideologically neutral practice (Zevi, 1957; Robinson, 1975; Barthes, 1977; Colomina, 1987; Colomina, 1996), and its persistence as a practice confirms that long-standing and widely-circulated arguments about the effects of media on designers' ability to *conceive* architectural thought (Zevi, 1957; Graves, 1977; Piotrowski, 1994; Leatherbarrow, 1998; Bermudez and King, 2000; Porter, 2004; Boge and Sullivan, 2006; etc.) have either not registered among the students, or as is more likely – this especially given the early stage of their university education – that the students have simply not yet been exposed to these arguments.

Relationships between value attribution and the tendency to credit designers

The sample indicates a tendency for students to fail to credit architects for works of architecture deemed "bad" or "ugly", and that students tended more strongly to credit architects for "good" works of architecture.

total number of buildings assigned a "good" value:	82
of these, how many are credited to an architect:	71%

total number of buildings assigned a "bad" value:	81
of these, how many are credited to an architect:	47%

total number of buildings assigned a "ugly" value:	81
of these, how many are credited to an architect:	42%

Tables 5a, 5b, 5c. Frequency of crediting architects for referenced work.

A partial explanation for the students' willingness (or ability) to credit designers of "good" works is that the students are simply familiar with the same set of canonical "good" examples, most of which are introduced to them in a freshman-year course as work of specific architects. An explanation of the relatively lower percentage of projects identified as "bad" (47%) or "ugly" (42%) and simultaneously credited to designers is less obvious. As compared to the "good" and credited projects, there is a greater tendency for the students to choose locally accessible work when they are illustrating "bad" or "ugly" projects. These projects are distinct from remote work made familiar through the freshman-course lecture presentations. This set of locally accessible, uncredited, "bad" projects (apart from the implied comment it makes on the students' immediate environment) suggests a tendency for students to arrive at superficial judgments of design value, when once made, preclude further investigation – not even going so far as to find the name of the responsible architect.

The students are apparently in general, though incomplete, agreement about the design value of individual examples. For example, Centre Pompidou, a frequently-cited project, is identified by seven students as "ugly" and by one student as "bad." Notably, it is the failure of the group as a whole to agree completely on the design value of certain projects that forecloses the conclusion that they are simply repeating judgments they have been taught. For example, Antoine Predock's McNamara Alumni Center and I. M. Pei's Louvre Pyramid are each identified by four students; in each case, two students identify the project as "bad", while one student identifies each project as either "good" or "ugly".

Uncredited image sources

Most of the images in the sample are not credited to their source.

total number of images in the sample:	420
of these, how many are credited to an image source (e. g., website or book):	63
expressed as a percent:	15%

Table 6a. Image source citations.

However, note that of these 63 credited images, 49 came from the report of a single student, who credited every image to its source. If this one student is removed from the sample, the totals are:

total number of images in the reduced sample:	371
of these, how many are credited to an image source (e. g., website or book):	14
expressed as a percent:	4%

Table 6b. Image source citations for sample excluding exceptional case.

Note that all image citations which do occur in the sample make reference to Internet sources, from which it can be reasonably inferred that students performed no traditional "book research" during the production of their reports. This also supports a general conclusion that students tended to address the question of design value on a superficial level. The near-complete failure of the students to credit sources for the visual information in their reports simply reflects a general tendency of students to treat information found on the Internet as constituting public domain, neither subject to copyright nor indeed to acknowledgement of any kind (Austin & Brown, 1999; Stebelman, 1998). Appropriating architectural photographs into a report perhaps appears less insidious to students than appropriating text, particularly when those photographs are assumed to present an ideologically neutral stance, but both practices nevertheless constitute a taking of ideas belonging to someone else (and the practices persist despite internet plagiarism being present within public consciousness for ten years or more).

Building on results

In aggregate, these results suggest to us that students overwhelmingly treat the outward appearance of a work of architecture as the primary means of judging its value; and particularly, that students consider photographs to be both the ultimate point of reference for a given work of architecture, as well as neutral (unbiased) substitutes for those works. In short, students appear reluctant, unwilling, or unable to develop understandings of the "tangible speculation" (Graves, 1977) present in any successful mediating architectural artifact, such as a photograph.

Thus, recognizing that the students have missed opportunities to explore conceptual functioning of inherited images in their architectural case-study work, it appears necessary to formulate techniques for working with images specifically to encourage students to develop deeper understandings of mediating architectural artifacts (specifically, photographs), and hence of architecture itself. In the following section, we define two specific strategies for the production of architectural case-study reports which are explicitly designed to require students to take ownership of the theoretical stance inherent in the artifacts they select and produce to make their ideas visible. These strategies include projection shifts (the use of software to translate image content between orthographic and perspectival projections) and section-generation (generating new mediating artifacts from inherited photographs).

Projection shifts

To examine the degree to which photographic images are not epistemologically neutral requires identification and restructuring of their inherent biases, among the most obvious of which are (a) the photographer's choice of subject matter; (b) the photographer's choice with regard to the extent of framing; and (c) the photographer's choice for a specific point and direction of view. A straightforward way to initiate restructuring of an image is to rectify it, or graphically distort its perspective content into an oblique projection. Adobe Photoshop's Distort and Warp commands support basic image rectification:

Figure 1. Crown Hall, Illinois Institute of Technology, Chicago, Illinois.

The immediate apparent effect of projection-shifting from perspective into elevation is to deny the relevance of the physical point of view of the photographer. However, inspection of rectified images shows this is not the case. A consequence of projection-shifting is to highlight the subject architecture's depth of elevation, or its modeled departure from an idealized plane. This effect, which in the rectified image is simultaneously a flattening and a spreading of photographed depth, occurs for example at recessed or projected portions of the elevation. Thus, when a perspective image of a work of "deep" architecture is rectified, visible effects of its depth not only remain present, but are emphasized through visible distortion. It follows that as software apparently de-emphasizes the effect of a specific photographer's point of view, those characteristics of a work of architecture the visibility of which are most dependent on a specific point of view are highlighted. Consequently, by entering an inherited image into a realm of suggestivity or incompleteness, projection-shifting initiates constructive discourse on an attribute of architecture – its depth of elevation – which is not obvious if attention is limited to unmodified images. In summary, projection-shifting opens opportunities for speculation about the degree to which understanding of architecture is conditioned by a specific point of view through the medium of photography. Critically, by entering the inherited image into a territory of speculation, the strategy enables students to take ownership of a specific theoretical stance.

Looking from within

Given the students' general failure to acknowledge the possible criticality of architecture's ability to structure views to forming a judgment of its value, we propose the technique of *opaque screen filtering*. We specifically intend this technique to provoke students' development of particular

theoretical stances regarding relationships between *the value of a work of architecture* and *the ways in which that work of architecture structures views from within*.

Using Adobe Photoshop, an inherited photograph is manually overlaid by an opaque screen corresponding to the positions and extents of openings in the building's facade. This opaque screen is reversed, rectified and/or re-subjected to perspective distortion if necessary, and overlaid atop a second photograph of the building's site – or, if a photograph of the site is unavailable, on a substitute image which should at a minimum include a reference horizon.

Figure 2. Hawa Mahal (Palace of Winds), Jaipur, India.

Simply as a means of distinguishing between works of architecture on the basis of how views are structured, the technique is of practical but limited value. Its contribution toward developing a theoretical stance regarding the value of a given work exists in its ability to disclose conceptual functioning of a specific work of architecture. Mario Gandelsonas has proposed that architecture constitutes the site in which representation is articulated (Gandelsonas, 1999), while Beatriz Colomina has described architecture as "a mechanism of representation". (Colomina, 1996: 13.) The technique of opaque screen filtering forms a means of describing how this mechanism functions: specifically, by forwarding those aspects of a work of architecture *which when seen through* enter a site into understanding in particular ways. Seeing (representing) will always be fragmentary (Graves, etc.). How, through architecture, is that fragmentary understanding structured? How is the site left behind as one enters the building, how is it returned to by degrees as one moves through the building? *How is the site remembered when unseen?* These questions are critical to an informed conception of inherited images within case-study work.

Conclusion

As opportunities to access information relating to remote works of design via the Internet have expanded, students' tendency to appropriate mediating artifacts produced by others to support arguments has intensified (Austin & Brown, 1999). This intensification suggests that students are increasingly reluctant, unwilling, or unable to take ownership of the tangible speculation present in successful mediating artifacts, as instead, they appropriate someone else's theoretical stance as their own. This appropriation is evidenced every time a photograph or drawing is inherited from an Internet source into an analytical study. Our work suggests that students are treating the process of gathering information and forming conclusions as one motivated primarily by outward appearance (superficiality) of works of architecture, most likely aided by the ease of accessing supposedly neutral information from the Internet. The specific problem which we have considered is the tendency among students to frame architectural case studies as opportunities to gather and communicate ideas conclusively instead of as opportunities to provocatively develop those ideas informing the production of new work. Colloquially, students often eagerly await the conclusion of a studio project's "analysis phase" in order that a "design phase" can begin, without appreciating that the act of making ideas visible in an analytical study is itself an act of design.

Nevertheless, we do not feel that an increased accessibility of information must result in intellectually weaker analytical studies. William Porter, in "Designers Objects", acknowledges the importance of objects created that are not critical to the production of a building, distinguishing them from objects which directly aid architectural design: the former, he writes, though not strictly "representative", are nevertheless "integral to the cultivation of ideas that relate to the building." (Porter, 2004.) Such objects, which we could here call *iterative mediating artifacts,* reflecting the idea that they are fragmentary and produced in a reflective or iterative process, can, according to Porter, "be seen as integral to the process of learning that occurs during the design process, in which they [the objects]

surface ideas, elements, properties, and relationships that can become appreciated and later appropriated into the designer's stream of thought." (Porter, 2004: 78.) Gabriela Goldschmidt and Ekaterina Klevitsky echo this notion in their description of "reconstructive memory" made possible through the post-construction production of mediating artifacts. (Goldschmidt & Klevitsky, 2004.) Generally, the observations of Porter, Goldschmidt, and Klevitsky can be understood as specific support for what Andrzej Piotrowski acknowledges as the role of representation in "the transformation and crystallization of concepts of lived reality beyond the design phase." (Piotrowski, 2001: 48.) By articulating and promoting techniques in which students are expected to deliberately and directly *act* upon inherited images – not simply to collect and arrange them – we hope to improve the conceptual strength and conviction of future architectural case-study work. Through the assignment described here, students developed their own criteria for judgment of architecture, with results suggesting that they treat mediating artifacts as neutral registers of content. Next, we plan to consider how students might develop a fuller understanding of the roles of these artifacts in making judgments. How, for example, might criteria be articulated and developed for students to judge the quality of inherited artifacts, providing the students with improved means by which convincing frameworks of evaluation for architecture could be defined?

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