Design By Competition: Looking at Competition Architecture through Time

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Abstract

Research consistently shows differences between what architects and the public like. To the question of whether architects (the experts) lead public tastes over time, we only have anecdotal evidence. This paper discusses two historiometric studies of competition architecture through history. One looks at the record of „masterpiece" buildings derived from frequency of citation in books and encyclopedias. Few result from design competition. The other study had architects and non-architects judge photos of competition winning and competition losing designs through history. Both groups preferred more losers to winners. The paper discusses the implications for further research and for the running of competitions.

We have seen an increase in the number and cost of design competitions for the delivery of public buildings [1]. Because design competition architecture occupies public space, uses public money, and affects the ordinary person's experience of their surroundings, it should be accountable to the public. Architectural associations such as the AIA or RIBA often call for a jury dominated by architects, even though research shows major differences between architect and public preferences.

In a series of studies of a highly publicized design competition (Peter Eisenman's Wexner Center for the Visual Arts), we found that public opinion data of the entries disagreed with the jury choice and accurately predicted subsequent public opinion of the completed building. Many people believe that architects lead public opinion, and that following public opinion on visual form will yield mediocre results. For example, Corbusier said that the public had to be re-educated, and others have wondered about the vulgarity of designs for the public and asked whether architects should take these architectural tastes seriously [2]. According to this view, competitions judged by architects should deliver better buildings, artistic masterpieces. Some competition buildings, such as the Sydney Opera House or the Eiffel Tower, now convey a positive image. While authors have argued that competitions produce some successes [3,4], they fail to define or measure success.

Because of the public nature of competitions, I have argued for the use of public opinion data as information for a design jury [5]. Such scientific research could have a potential flaw. If initial reactions to a building change with exposure or change over generations and if designers lead public taste[6], then designs based on cross-sectional studies of popular preferences would not stand the test of time. The research would not have captured long-term evaluations of the building.

We also lack solid evidence that architect judgments has a bearing on future appraisals. In less than twenty-five years, taste standards for architects shifted from modernism to post-modernism to deconstructivism, and they continue to shift. Anecdotal evidence for 20th century architecture suggests a strong and long-lasting public distaste for "high" style architecture. Recent studies confirm public dislike for "high" style designs [7, 8, 9, 10].

Otherwise, we have anecdotal speculations--reports of reactions to individual artists and works--about the long-term accuracy of expert judgments. Gans pointed out the flaw in these compelling high culture arguments [11]. He suggests that some people pit the best of the "high" culture (the Vietnam Memorial, the Eiffel Tower, Sydney Opera House) against the worst of "popular" culture (velvet paintings or the American commercial strip). This selective sampling ignores poor or mediocre high culture products as well as successful "popular" culture products. Anecdotal arguments do not serve as a basis for building knowledge. We need to know the proportion of successes to failures for competition winners and other designs. This paper is a preliminary look at such historical data empirically.

The scientific approach need not be locked in time [12]. "Historiometric inquiry" applies the scientific method to historical data to uncover general laws over time [13,14]. It represents the intersection of psychology, science and history [15]. Following the scientific method, it: 1) defines and samples the "unit of statistical analysis"; 2) operationalizes "the crucial variables under investigation"; 3) calculates "relationships among these variables"; and 4) uses "statistical analyzes to tease out the most probable causal connections." [16]

The approach is nomothetic in seeking general laws. It differs from much environment-design research in its focuses on the historical record as its source of data. It also differs from other historical endeavors, that are idiographic (focusing understanding the particular). In one historiometric study, Simonton identified composers and compositions that stood the test of time [17]. By comparing the note structure of more than 15,000 themes, he quantified attributes that differentiated the masterpieces from lesser works. Other resear-

chers have used historiometric methods to examine cultural meanings of Swiss housing [18], evolutionary trends in gothic architecture [19], and historical precedence for street design [20].

Historiometric inquiry, used along with other methods, can provide a validity check. For competitions, it add the time dimension and provides a check on the present data showing public distaste for the Wexner Center and more generally for architecture liked by architects.

A Study of Masterpieces

In the first of two studies, we compiled a list of 80 architectural masterpieces. We defined a masterpiece as a building frequently cited by experts on architecture. The final list included buildings cited in at least three of the five encyclopedias, and it included the buildings with the most amount of space devoted to them. We expanded the list by looking at the frequency of citation of architecture in books on architecture in the twentieth century.

Checking the history of each building revealed that only three of them resulted in part or whole from a competition. In one case the praised design had lost the competition (Saarinen's Chicago Tribune entry). The proportion of masterpieces (3 out of 80) seems small and suggests that, at least historically, competitions may not result in masterpieces. However, we can only make tentative inferences from the numbers, because we do not know the proportion of buildings (or major public buildings) that result from competitions, the proportion of leading architects who avoid competitions, or the proportion of winners early in their career. For additional information, we examined the responses of present day observers to competition winners and losers through history.

Present Day Responses to Competitions Through History

A pilot study had examined student responses to award winning designs vs. other designs over time. Looking at citation winning and non-citation buildings published in *Progressive Architecture* between 1930 and 1990, the study had found that architectural students and non-architectural students did not favor citation-winning designs to the others [21]. In fact, the architecture students reported higher preferences for the non-citation buildings and the non-architects gave neutral scores to both kinds of building.

Would similar findings emerge for a comparison of competition winners and losers? The present study expanded the pilot study to consider adult reactions (both preference and judgments of good design) to competition architecture.

Selecting Competitions. We selected competitions from a 104 year period from 1882 through 1986. For that period, we paired each of twenty-five competition-winning designs with a loser in the same competition. To develop this sample, we searched journals and books for competitions for images showing competition winners and losers. The search uncovered ninety competitions with published images of both winners and losers. Experimental controls reduced the sample to fifty usable competitions from 1882 through 1987: Because variations in mode of presentation (drawing, model, photo of completed building) or viewing angle might affect response, we retained only those instances with similar modes of presentation and similar viewing angles for the winner and at least one loser. We initially sought five examples from each decade from 1880 through 1990, but only two decades (1921-1930 and 1980-1990) had an adequate number of paired winners and losers. We combined four competitions from 1882 through 1903 with one from 1916 to get a 34-year category (1982-1916). We joined two competitions from 1930 and 1931 with three competitions from 1946-1947 to make up a 27-year category. We also joined three competitions from 1956 with two competitions from 1965 and 1967 to make up an 11-year category. This yielded five pairs of competition winners and losers from each of five time periods: 1882 to 1916, 1921 to 1929, 1930 to 1947, 1950 to 1967, and 1981 to 1987. The sample included a handful of famous competitions--the Reichstag (1882), Helinski Station (1903), Stockholm Town Hall (1903), Chicago Tribune (1922), and Humana Building (1982). It included fourteen different building types and one building-type (housing) present in each time period, including six houses, three corporate buildings (two of which were towers), two government buildings, one civic center, two stations, two libraries, a bank, an embassy, a diplomats' club, a chapel, two museums, an auditorium, a museum/auditorium, and a memorial.

Selecting   Respondents. We had 50 practicing architects and 50 non-architect professionals in Columbus, Ohio evaluate the designs. An interviewer visited twenty-one architecture offices and twenty-one non-design offices nearby the architecture offices. In each group, 90.4% of the firms agreed to participate. The participating firms provided between one to eight persons for interviews, with most firms (92%) providing fewer than five respondents. The groups were similar in age (averaging approximately 42 years old) and years of practice (average of approximately 16 years). Reflecting the actual professions, the architect sample had a higher proportion of males. The non-architectural group included engineering, accounting, marketing, management, communications, teaching, school administration, insurance, nurses, radiologists, counseling, federal investigation, writing, pharmacist, chaplain, social work, optician, loan processor, and banking.

Survey Form. We created booklets with each winner in a plastic folder next to the loser of the same competition. We randomized the orders of presentation of the building pairs; and for each pair we rotated the location of winners and losers. Half the time a winner appeared on the left and half the time it appeared on the right. We matched these arrangements for the architects and non-architects. The respondent would only see one pair at a time. The interview obtained ratings of preference, best design, building recognition as well as background information on gender, year of birth, and years in practice. In each group, half the respondents received the preference questions and half received the „better design" questions first.

We found consistent responses for the full sample and for the architects and non-architects taken separately. There was high inter-observer reliability scores on liking (alpha = 0.89) and better design (alpha = 0.85). We also found high inter-observer reliability within each group. This evidence of consensus supported the use of the composite scores for the full sample, and for each group.

Our examination of building recognition showed that it did not bias responses. Few respondents reported recognizing the buildings. The analysis tallied the number of respondents indicating that they recognized a building. For all but three competitions, fewer than 5% of the sample said they recognized a building. For the Chicago Tribune Tower (1922), ten respondents said they recognized the winner and eight said they recognized the loser; for the Harding Memorial (1925) ten respondents claimed to recognize the loser; for the Human Tower (1982), twelve respondents said they recognized the loser, and four said they recognized the winner, and an additional thirteen claimed to recognize both. Inspection of responses to the recognized buildings suggested that recognition did not skew ratings. Dropping responses to "recognized" buildings did not change the pattern of results.

Results. Did the respondents evaluate the winning entries more favorably than the losing entries? No. They favored the losing entries. The full sample of respondents selected significantly more losers (1378) than winners (1118) as preferred, and significantly more losers (1351) than winners (1144) as the better design ($X^2 = 27.08$, 1df, p < 0.001; $X^2 = 17.18$, 1df, p < 0.001). Analysis of the responses of the architects and non-architects separately confirmed the pattern. Significantly more individuals in each group selected more losing than winning entries as preferred and as better designs. The non-architects chose a significantly higher proportion of losers to winners as preferred (59%) than did the architects (51%), but each group chose more losers than winners. A similar pattern emerged for judgments of the better design. Each

of the interactions achieved statistical significance (Preference: $X^2 = 16.56$, 1df, $p < 0.001$; Better Design: $X^2 = 9.172$, 1df, $p < 0.01$).

The pattern also held for comparisons over time. For all but one time period (1950-1967), significantly more respondents selected losers than winners as preferred. Significant differences emerged for comparisons of buildings in 1882-1916, 1930-1947, and 1981-1987. In each case, respondents chose more losing entries than winning entries as preferred. For better design a similar pattern emerged. In all but one time period (1921-1929), respondents selected more losers than winners as the better design. These differences achieved statistical significance for 1882 - 1916 and for 1981-1987. In each period, respondents chose significantly more losing entries than winning entries as the better design.

The results also confirmed the familiar pattern of differences in response between the architects and non-architects. For two periods (1921-1929, 1930-1947, more architects (compared to non-architects) chose winners while more non-architects (compared to architects) chose losers as preferred and as the better design. For another period (1956-1967), the pattern reversed: Relatively more architects chose losers and more non-architect chose winners as preferred and as the better design. In the last period (1980-1986), relatively more architects chose winners and more non-architects losers as preferred. Equal numbers of architects chose winners and losers as the better design, but more of the non-architects chose losers as the better design.

We repeated the tests for the one building type-houses. These tests centered on six competitions: one house competition in each period except one that had two house competitions. The results agreed with the earlier results. For preference and better design, significantly more respondents chose losing than winning entries for 1882-1916 and 1981-87. They chose more winning entries than losing entries for one house competition in 1930-1949.

Conclusions

The results do not support the view that architects, as seen through competition juries, lead public taste or select lasting masterpieces. Only a small proportion of „masterpiece“ buildings resulted from design competitions; and architects and non-architects preferred losing entries to competition winners through history.

The second study only looked at visual impressions of images of the buildings. A more complete analysis would examine space, functioning and overall performance of the competition winners compared to non-competition

buildings (of similar type and age) over time. Although historical data of this sort is not available, we can start to create it by gathering such information on competition winning designs. Further research could compare competition-winning designs with the full sample of losers or with non-competition designs.

If the same pattern of results hold, that would suggest different procedures for running competitions. We might change the composition of juries to include other experts involved in building delivery and upkeep and to involve representatives of the public. The sponsor could obtain and present public opinion data to the jury.

Unlike art in a gallery or a secluded house, competition architecture is highly public. It involves public money, occupies a public site, and it affects passersby and occupants. As a result, this form of building must work for the public. It must work functionally, technically and aesthetically. By trying different procedures and evaluating their performance for the productivity of the competition (getting the entry built) and the performance of the completed buildings, we can improve competition performance for the clients, competitors and the building users.

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