

Museum Gallery Morphology and Orientation in Gallery Spaces: An Inquiry on the YCBA, the MoMA-New Extension (N.Y.) and the HMA

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The critical issue in museum design is to create legible gallery layouts that would provide visitors with good orientation for their explorations. Legibility of a layout can be defined by the degree to which the entire space can be understood through its local parts. This capacity is shaped by morphological characteristics of layouts, because the morphology creates a network of visibility relationships in space and determine the degree to which local visual information is linked with the global visibility.¹

This study aims to explore the ways in which morphological characteristics provide good orientation in art museums. To this end, it investigates (1) to what extent visibility relationships predict visitors' behavior of visually scanning the layouts and (2) which aspects of morphology can play role in predicting this behavior. These questions are addressed through the examination of three case study museums: the Yale Center for British Art, New Haven (YCBA), the Museum of Modern Art-New Expansion, N.Y. (MoMA) and the High Museum of Art, Atlanta (HMA). In order to investigate the research questions, this study compares global syntactical and local non-syntactical visibility properties of gallery space with visitors' stops visually scanning exhibitions and/or galleries. The results obtained from these investigations in each museum are evaluated comparatively to identify the aspects of morphology that may retain visitors' sense of orientation.

The findings suggest that visitors' behavior of scanning the layouts are influenced by visibility properties in the three museums in varying degrees. This variation can be explained by the results demonstrating the effects of local non-syntactic visibility properties on the stop counts. Accordingly, In the YCBA, visitors' stops are predicted by visual information of neighboring locations. The visual information is most available around the atrium openings, and this explains why visitors' behavior of stopping to regain orientation is concentrated around the atria openings. The results also show that exposed wall surfaces and hidden regions in the visual fields are the important aspects of the local visual information that influence visitors' scanning behavior. In the MoMA, visitors visually scan the gallery space where they can have vista through gallery doorways and through few atrium openings, because this is how visitors come in contact with the information of the entire gallery. In the HMA, although visitors' stopping to scan the galleries is found linked with local and global visibility properties, the aspects of local visual information that play role in this influence could not be identified; because, two wings of the gallery layout have different morphological characteristics. From these results, it can be concluded that the effect of local visual cues can explain which aspects of morphology can provide good orientation for visitors. The central locations (atria voids) that provide visual interconnectivity to the gallery spaces release the visual information of gallery space, and thus provide good orientation during visitors' exploration in the galleries. When atrium voids are less connected to the galleries, the layout provides poor sense of orientation for visitors in the galleries and retains the orientation only in circulation spaces.

¹ This definition is derived from the concept of spatial intelligibility discussed in particular in Bill Hillier's *Space is the Machine* (1996), pp.128-30.