

Variations + Versioning

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...(see p. 432)

A major holdover from the previous culture of making is that of repetition and modularity. It is true that it is always cheaper and faster to make the same part, component, or building over and over again but then again cheaper is not necessarily better. Through computer driven manufacturing, we can now provide more customization and variation for minimal economic investment as opposed to the repetitive quantitative benefits afforded by mass-production. For many decades architects have used their time during design development to standardize the form, dimensions and materials to fit available parts, products, and methods. Many architects fear mass-customization because it offers no perceived resistance, removing the standardization phase of the design process, and ultimately the necessity to think critically about making. Mass-crafting looks for the criticality not within the specification of available parts but in the restrictions provided by the new tools in the manufacturing process. Even if an architect designs a building employing components of standard sizes, a water-jet cutter will not make any distinction between rectangular or freeform cuts. Water-jet cutting, as just one possibility for cutting, has limitations of sheet size, depth of cut, and file input format. The price of the panel is not based on the complexity of shape but instead will be based on machine time and material cost. The designer can now engage the process directly, using the computer file to potentially cut a panel that takes less time to cut, is pre-drilled for assembly, conserves material, and creates a building façade with a desired effect. Resistance and limitations of making exist but they are not only opportunities for designers to reclaim aspects in the building manufacturing process but they are ways to be critical about making.

1. Lux, David S., "The History of American Technology - Small Arms in Revolutionary and Early National Eras". Course taught at Bryant College. <http://web.bryant.edu/~history/h364material/musket/index.htm>

2. MODEL T FORD PRODUCTION (Compiled by R.E. Houston, Ford Production Department, August 3, 1927)

3. Hoffman, Carl. "The X Wars", Wired Magazine Issue 9.07 July 2001.

