(f) *Open Source vs Total Design*

Total design is a process that maximizes authorial control. Stuart Pugh, a product designer and engineer, first introduced the term in 1990 to describe a systematic process that encompasses all aspects of design from conception to production.[1] He believed that the designer was responsible for creating a “design core” that would guide all subsequent design decisions, and ensure that the designer’s intent remained intact during the multi-disciplinary interventions required to realize a work. But the principles of ‘total design’ influenced the discipline of architecture long before Pugh introduced the term.

The idea can be traced all the way back to Michelangelo’s proposal for the façade of the Basilica of San Lorenzo in 1518. The design integrated niches for his sculptures, and exemplified his belief in merging the roles of architect, artist and sculptor into a single identity with control over multiple aspects of the work. The idea resurfaced again in the 19th century when German composer Richard Wagner introduced the *Gesamtkunstwerk* to describe a total, comprehensive work of art. But it wasn’t until the Bauhaus that the idea of the total work of art began to define the profession of architecture. Students under Walter Gropius received “a complete co-ordinated training in all handicrafts, in technique and in form.”[2] The Bauhaus shows the emerging desire to extend architectural control across multiple disciplines and aspects of building.

“Total design equals total control.”[3] It positions the architect as the coordinator of design activities in areas outside of his or her expertise, and claims to create an architecture without limits. It explodes inward to touch all aspects of the interior, and outward to spread its influence across every aspect of the built environment. Total design preserves the intent of a singular architectural vision by dispersing it across all fields. It allows the architect to exert control without performing every design task, but by managing the overall design process to ensure the continuity of a work’s authorial intent.

‘Open source’ design is an emergent phenomena primarily related to software development. It allows the highest degree of user control and participation by allowing anyone access to the source code. Linux, for example, is an open source platform whose source code is available to the public and developable by anyone. It’s a type of ‘free software’ that allows users to run, copy, distribute and change it, and it encourages people to improve upon it.[4] Linux is based on an operating system ‘kernel’ originally designed by Linus Torvalds in 1991. More than 16 million lines of code have been added to the kernel since the original version. Linux is open to manipulation by anyone. Its source code is susceptible to mutations that have the potential of completely changing the purpose of the software from one version to the next. However, Linux has one characteristic that must remain unaltered – free accessibility. Linux was released under the GNU General Public License, which requires that both the software and the source code remain free and open to manipulation. Ironically, by preserving the intent of open access, Linux could be categorized as a total design.

In “Whatever Happened to Total Design,” Mark Wigley says, “there is no such thing as non-totalizing design. All design is total design.”[5] He argues that the perpetuation of an image or idea, even one of flexibility of manipulability, constitutes ‘total design.’ By this logic, even open source design is total design because it preserves the idea of openness. All design, to some degree, involves the preservation of the designer’s intent. The designer’s original intent, established at the time of creation, is the one fundamental characteristic of a work that allows it to retain its identity, the strain of its genetic material that must be allowed to persevere through successive mutations. If the original intent, or the recognizable, identifiable characteristic of a design is not preserved, then the identity of the design is compromised. It becomes something else entirely.

If we accept the idea that a designer’s original intent is a necessary characteristic of any design, then we see a distinction, again, between ‘open source’ and ‘total design.’ The difference between the two is a matter of degree. Both ‘open source’ and ‘total design’ are about the distribution of control, and to what degree that control resides outside the original designer.

---

[1] Pugh, Stuart. *Total Design: Integrated Methods for Successful Product Engineering.*
[2] Gropius, Walter. *The Scope of Total Architecture*. 23
[3] Woods, Lebbeus. “Total Design” 1
[4] Free Software Foundation. "What is free software?" Accessed 11.26.15
[5] Wigley, Mark. “Whatever Happened to Total Design.”