



Less is More: Creativity Through Scarcity

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When necessity drives innovation, design can move building technology beyond conventional resource and economic patterns. Today, economy of means continues to be an important demand on architecture and its allied disciplines. Climate change, finite natural resources, and economic uncertainty inform almost every aspect of the built environment as more architects, planners, and engineers diverge from the course

of designing for endless growth. While it has become common practice to accept the challenges of working with less, the relationship between constraint and design fluctuates as the parameters used to describe conditions of scarcity change:

Scarcity is generally understood as an “inadequate supply or shortage,”¹ a condition expressed as diminishing or poorly managed natural resources such as oil, water, and food. In this environmental domain, scarcity is considered as an actual limit on resources.

The term “scarcity” is also used to describe economic constraints or an unbalanced supply-and-demand ratio.² When the expression enters an economic or political context, scarcity can become a socially constructed state, where economic forces create artificial conditions of inequality and an uneven social or global distribution of resources.³

The first two definitions of the word are largely based on the availability of resources, while a third reading refers to the understanding of scarcity as a principle. Based on the additional meaning of “rarity or infrequent occurrence,” scarcity can establish new value systems for the use of resources, an acute awareness of environmental and economic conditions, and design approaches. In this context, the economical use of resources carries a cautious, rational, and prudent connotation. Architecture based on these criteria restricts itself to indispensable aspects, such as functionality. It can be perceived as minimalist—and perhaps even elegant—though not necessarily inexpensive. Thus, economy holds the potential of esthetic surplus value.⁴

The complexity of defining scarcity, and its influence on architecture and the built environment, has led to several recent publications and research projects. The *Architectural Design* July 2012 issue, *Scarcity: Architecture in an Age of Depleting Resources*, defines positions on scarcity relative to resource management. Much of the material presented in this issue stems from the research collaborative *Scarcity and Creativity in the Built Environment (SCIBE)*, a cooperation between the University of Westminster, the Technical University Vienna, and the Oslo School of Architecture and Design. Recent conferences and initiatives at other architecture schools underscore a broad, global interest in the topic. The symposium *Make_Shift: The Expanded Field of Critical Spatial Practice* at the Technical University Berlin convened in fall 2012.⁵ The *Generalist*, published by the Technical University Darmstadt, featured an issue on *Saving* in 2010, which investigates creative ways of working with dwindling resources. Design professionals in the United States have also called attention to issues surrounding scarcity and design, as seen in the Seattle-based publication *ARCADE*'s fall 2012 issue, entitled *Global More = Global Less*.⁶

Based on this ongoing research, the conference session *Less is More: Creativity through Scarcity* seeks to explore the relationship between scarcity, creativity, and design. Whether the result of natural limits, artificially imposed conditions, or a matter of practice, the constraints of scarcity frequently spur innovation. Innovation can, in turn, resolve conditions of scarcity. The origin of the word "scarcity" is derived from the Anglo-Norman *escars*, meaning "plucked out, or selected."⁷ Selection brings ideas into focus. Anything that is scarce becomes the subject of intense scrutiny and study, fostering a greater understanding of an available resource, or an awareness of possible alternatives. Scarcity's influence on design has been present throughout history, and has typically been manifested in the following ways:

LESS IS MORE

Conserving material or saving time are familiar means of managing scarcity. Much of the work produced during the later years of the Bauhaus was centered around exploring the critical connection between design, efficiency, and mass production. The German economic crisis during the interwar period became a pivotal moment at the school, where the standardized production methodologies initially developed by the *Deutscher Werkbund* were tested. During the school's *Vorkurs*, Josef Albers makes it clear that waste is not an acceptable product of design, as he informs his students: "Ladies and gentlemen, we are poor, not rich. We cannot afford to waste material or time."⁸ For Albers and those subsequently influenced by Bauhaus methodologies, understanding the nature of the material at hand was an important step, linking design with efficient production. Today, a designer's capacity to study and understand the nature of scarce resources has never been greater, through the use of digital technology.



OSCILLATION BETWEEN SCARCITY AND ABUNDANCE

In their 1963 book *Scarcity and Growth: The Economics of Natural Resource Availability*, Barnett and Morse argue that an increasing scarcity of particular resources fosters discovery or development of alternative resources. Attention will continually shift from singular resources to adapting and utilizing more abundant ones. That “resources can only be defined in terms of known technology” pervades contemporary thinking about managing scarcity.⁹ As designers are continually challenged by climate change, economic uncertainty, and finite natural resources, the ability to discover and then envision the latent potential found in alternative resources and processes is an increasingly valuable skill.

REVELATION AND CRITIQUE

The most current manifestation of scarcity’s influence on design is as a visible critique. In *The Production of Value*, Jon Goodbun observes that most “designed objects and environments often obscure their conditions of production.”¹⁰ When the circumstances of production are revealed, either through the design process or within the final work, issues surrounding scarcity (such as unequal distribution of resources, waste, and environmental degradation) can come to the fore. The work of artists and architects such as Theaster Gates, Raumlabor, and Amateur Architecture Studio encourage a critical use of resources by revealing some aspect of truth behind contemporary conditions of scarcity, and establish new value systems that educate and challenge existing practices.

Relative to these examples of scarcity’s influence on design, the authors participating in this session describe particular processes through which absence becomes the mainspring for a heightened state of awareness. Each session paper reveals how scarcity serves as a catalyst for design, carrying with it creative potential and prospective innovation. In *Scarcity and Standardization: Architects’ Data and the Exigencies of Total War*, Nader Vossoughian illustrates how Ernst Neufert’s book, *Die Bauentwurfslehre*, or *Architects’ Data*, was conceived as a powerful design tool enabling proficiency in material economy, spatial efficiency, and time management. Vossoughian argues that *Architects’ Data* “historicize[s] the links between scarcity and standardization in 20th-century architecture.” Kiel Moe’s paper, *The Fallacy of Efficiency and Scarcity*, proposes that a contemporary architectural agenda for energy cannot be based solely on strategies such as conservation and efficiency. Attention must shift instead to design solutions that “are motivated by achieving maximal forms of exuberance, abundance, and affordance.” In *The Scarcity Aesthetic: Art, Design, and Population when Systems Fail*, Charissa Terranova describes how uncertainty, arising from the threat of disaster, failure, and scarcity, is reflected in contemporary art and architecture. The “scarcity aesthetic” gives form to an otherwise invisible undercurrent, opening up the potential for evaluation and dialogue. The session papers *Readymade* by Cheryl Atkinson, and *Something from Nothing* by Marcus Shaffer, identify discarded “readymades”—such as existing building typologies or industrial (by)products—as new,

underutilized resources that exist in abundance. While mining these new-found assets, both projects visibly inspire the conscientious use of natural resources within the wider community. In *High and Dry, Performance around Water's Absence*, Beth Weinstein highlights how the scarcity of water can spark the creative process, acting as a motive, an opportunity, and a method, for research, design projects and installations that all serve to educate student participants and the public at large. In *An Ecology from Absence: In Place of Pruitt-Igoe*, Nora Wendl reveals how vacancy, caused by the demolition of the Pruitt-Igoe housing complex, inspires the development of "creative and generative systems, of which architecture plays only a small part, if any." Here, absence affords the promise of remediation, renewal, and growth within the city.

Working with less—resources, space, and time—will most likely continue to inform much of the built environment in the future, although the parameters and mechanisms of scarcity that influence creative design innovation have not yet been fully explored. The relationships between scarcity, creativity, and design, as presented in this session, reveal new modes of working that elevate (resource) constraints from limitations to design opportunities. ♦

ENDNOTES

1. Simpson, J. A., and E. S. C. Weiner. 1989. *The Oxford English dictionary*. Oxford: Clarendon Press.
2. Goodbun, Jon. *The Production of Value. Scarcity and Creativity in the Built Environment*, <http://www.scibe.eu/wp-content/uploads/2010/11/02-JG.pdf>
3. Goodbun J., Till J., and Iossifova D. 2012. "Themes of scarcity". *Architectural Design*. 82 (4): 8-15.
4. Fachbereich Architektur, TU Darmstadt (Ed.). 2011. "Sparen | Saving". *Generalist*. 4.
5. See: http://www.kw-berlin.de/index.php?option=com_content&view=article&id=587%3A%20make%20shift-the-expanded-field-of-critical-spatial-practice&catid=39%3A%20Archiv&Itemid=214&lang=de (accessed: December 08, 2012).
6. See: <http://arcadenw.org/issue-archive/global-more-global-less> (accessed: December 08, 2012).
7. Simpson, J. A., and E. S. C. Weiner. 1989. *The Oxford English dictionary*. Oxford: Clarendon Press.
8. Forgács, Éva. 1995. *The Bauhaus idea and Bauhaus politics*. Budapest: Central European University Press.
9. Barnett, Harold J., and Chandler Morse. 1963. *Scarcity and growth; the economics of natural resource availability*. [Washington]: Published for Resources for the Future by Johns Hopkins Press, Baltimore.
10. Goodbun, Jon. *The Production of Value. Scarcity and Creativity in the Built Environment*, <http://www.scibe.eu/wp-content/uploads/2010/11/02-JG.pdf>