## The Generator as a paradigm for systemic design

Ben Sweeting May 2019

In addressing systemic contexts, designers must address what Horst Rittel and Melvin Webber (1973) called wicked problems. The incomplete and changeable criteria of a wicked problem are such that any proposed resolution may be quickly superseded. One strategy for coping with this is to design systems that can adapt to the circumstances they find themselves in. One of the most challenging contexts in which to pursue such a strategy is architecture. This is most obviously because of the physical difficulty of making any changes, but also because those affected by the built environment often have little agency over it. One particularly notable attempt to achieve an adaptable architecture is the Generator, an unbuilt project designed by British architect Cedric Price during the late 1970s, with Julia and John Frazer acting as cybernetics consultants (Furtado Cardoso Lopes, 2008; Hardingham, 2016; Spiller, 2002, pp. 84-89; Steenson, 2010). In this paper, I explore this project as a possible paradigm for systemic responses to wicked problems in other contexts, especially in situations where consensus is either impractical or undesirable.

Designed for the Gilman Paper Company, Generator was influenced by Gordon Pask's Musicolour installation, and was a successor project to the Fun Palace on which Pask had worked with Price and theatre director Joan Littlewood. The architecture was designed to be adaptable by its users to support different activities. In addition, Generator also had the capability to rearrange itself, and would do so whenever the layout was not changed for some time, prompting new possibilities by putting its current purposes in question. In this paper I examine it through the lens of Pask's Conversation Theory (e.g. Pask, 1980, 1988), and contextualise it in relation to other approaches that are driven by difference, such as Paul K. Feyerabend's (1978) anarchistic epistemology, my own work on the incommensurability of ethical frameworks (Sweeting, 2018), and the role of tension, variety, play, and unmanageability in reformulating (rather than resolving) situations within systemic design (Glanville, 1997; Jones, 2018; Perera, 2018; Ryan et al., 2016). In so doing, I understand Generator and similar architectural projects as able to contribute to cybernetics and systems thinking as well as being informed by them.

## Reference list

- Feyerabend, P. K. (1978). Science in a free society. NLB.
- Furtado Cardoso Lopes, G. M. (2008). Cedric Price's Generator and the Frazers' systems research. *Technoetic Arts*, 6(1), 55-72. <a href="https://doi.org/10.1386/tear.6.1.55">https://doi.org/10.1386/tear.6.1.55</a> 1
- Glanville, R. (1997). The value of being unmanageable: Variety and creativity in cyberspace. In H. Eichmann, J. Hochgerner, & F. Nahrada (Eds.), "Netzwerke", proceedings of global village '97 conference. Falter Verlag.
- Hardingham, S. (Ed.). (2016). *Cedric Price works* 1952-2003: *A forward-minded retrospective*. Architectural Association.
- Jones, P. (2018, October 24-26). Evolutionary stakeholder discovery: Requisite system sampling for co-creation [Paper presentation]. Relating Systems Thinking and Design (RSD7) 2018 Symposium, Torino, Italy. http://openresearch.ocadu.ca/id/eprint/2743/
- Pask, G. (1980). The limits of togetherness. In S. H. Lavington (Ed.), *Information processing* (pp. 999-1012). North Holland Publishing Company.
- Pask, G. (1988). Learning strategies, teaching strategies, and conceptual or learning style. In R. R. Schmeck (Ed.), *Learning strategies and learning styles* (pp. 83-100). Plenum Press.
- Perera, D. (2018, October 24-26). Wicked problems, wicked humor: Fun machines as a method to frame wicked problems in architecture [Paper presentation]. Relating Systems Thinking and Design (RSD7) 2018 Symposium, Torino, Italy. http://openresearch.ocadu.ca/id/eprint/2753/
- Rittel, H., & Webber, M. (1973). Dilemmas in a general theory of planning. *Policy Sciences, 4*, 155-169.
- Ryan, A., Baumgardt, A., & Pangaro, P. (2016, October 13-15). *Playing with fire: Designing with and for tension in groups* [Panel discussion]. Relating Systems Thinking and Design (RSD5) 2016 Symposium, Toronto, ON, Canada. <a href="https://systemic-design.net/rsd-symposia/rsd5-2016/process-innovation/">https://systemic-design.net/rsd-symposia/rsd5-2016/process-innovation/</a>
- Spiller, N. (Ed.). (2002). Cyber\_reader: Critical writings for the digital era. Phaidon Press. Steenson, M. W. (2010). Cedric Price's Generator. Crit (the journal of the American Institute of Architecture Students), 69. <a href="http://www.girlwonder.com/blog/wp-content/uploads/2010/04/crit-piece.pdf">http://www.girlwonder.com/blog/wp-content/uploads/2010/04/crit-piece.pdf</a>
- Sweeting, B. (2018). Wicked problems in design and ethics. In P. H. Jones & K. Kijima (Eds.), Systemic design: Theory, methods, and practice (pp. 119-143). Springer Japan. https://doi.org/10.1007/978-4-431-55639-8