

# Games and learning about form in architecture

Antony Radford \*

*School of Architecture, Landscape Architecture and Urban Design, The University of Adelaide, SA 5005 Australia*

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## Abstract

Metaphors of play and games in the use of digital media in architectural education are described. The essence of ‘games’ lies in a person’s *immersion* in *play* subject to *rules*. The paper argues that embracing these metaphors is an effective means of developing student confidence and abilities in spatial modelling, design composition, and form creation. Some examples are provided. © 2000 Elsevier Science B.V. All rights reserved.

*Keywords:* Architectural design education; Games; Play; Education

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## 1. Introduction: play and games

The objective of the paper is to promote a relaxed and experimental approach to the beginning use of computer-aided design systems in architectural design education, encouraging in students a sense of play in structured games (Fig. 1).

I first began to be interested in finding ways to use computer graphics and modelling as a means for architecture students to learn about form and composition in 1987. I was then teaching at the University of Sydney, when Professor Robert Oxman and Dr. Rivka Oxman were visiting from the Technion, Israel. Towards the end of a year’s visit, Robert suggested offering a small intense design studio for ten students over two weeks of what would normally be student holiday, in which each student worked entirely with MacDraw software on a Macintosh computer. During this period, the students progressed rapidly through a series of highly structured exercises on the making of building plans, following

themes such as order, composition, enclosure and precedent. The work and the theory around it resulted in the publication of a small book, *The Language of Architectural Plans* [2], and a paper at a meeting of Australian architectural design instructors. The book was republished as one of the first working papers by ECAADE and presented at the annual conference of the equivalent American association, ACADIA. Since that time we have continued to build on those ideas (see, for example Ref. [3] for a description of some later exercises) and others have picked them up and taken them in various directions. In retrospect, the kinds of ‘exercises’, which were developed, can be more productively reframed as *games* (Fig. 2).

The essence of ‘games’ lies in a person’s *immersion* in *play* subject to *rules*. Immersion implies a complete absorption in the activity: ‘(…) in this intensity, this absorption, this power of maddening, lies the very essence, the primordial quality of play’ [4]. This absorption must be willing: ‘First and foremost (…) all play is a voluntary activity. Play to order is no longer play: it could at best be a forcible imitation of it (…) Play is not ‘ordinary’ or

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\* E-mail: aradford@arch.adelaide.edu.au

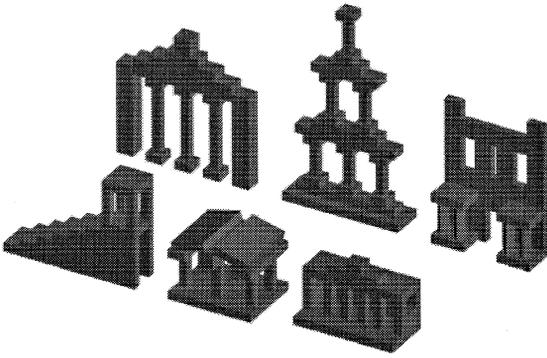


Fig. 1. The tradition of childhood play. Models from 'Forms of Life' using a Form · Z version of Gift 6 of the Froebel Gifts. "Try to use all the blocks to build an object, although some pieces may be used as accessories to the main object. Trying to change one form into another by moving only some of the blocks is difficult with this Gift. Therefore, it may be necessary for the child to often begin new forms" [1].

'real' life. It is rather a stepping out of 'real' life into a temporary sphere of activity with a disposition all of its own" [5].

The difference between 'play' and 'playing games' is the presence of rules. All games have rules; even the 'free play' of childhood is subject to implied and agreed rules that are interpreted by the players. Gadamer has written on "the way in which the rules of a game relate to its playing (...) The rules provide a framework for the playing of the game and determine the range of appropriate actions the players can take, but they do not account for the way the game is played or the way it turns out each time it is played" [6].

Indeed, the rules may change many times in the course of the play. In *Philosophical Investigations* Wittgenstein writes: "We can easily imagine people amusing themselves in a field by playing with a ball so as to start various existing games, but playing many without finishing them and in all between throwing the ball aimlessly into the air, chasing one another with the ball and bombarding one another for a joke and so on. And now someone says: The whole time they are playing a ball-game and following definite rules at every throw. (...) And is there not also the case where we play and — make up the rules as we go along? And there is even one where we alter them — as we go along" [7].

According to Huizinga, "all manifestations of civilisation — religious ritual, language, law, war, science, poetry, philosophy and art — are essentially forms of play. Play, for him, is not a 'silly pastime' but a significant function which 'goes beyond the confines of purely physical or purely biological activity' and 'transcends the immediate needs of life and imparts meaning to the action'" [8]. Interestingly, Huizinga exempted art from this general claim. Berne [9] has written in *Games People Play* on the way people act as if they are playing games in the various circumstances of life.

## 2. Games, language and architecture

Wittgenstein makes much of the analogy between language and games, and also refers to building; he uses building with blocks as illustration at the beginning of *Philosophical Investigations*. In both language and games, rules exist but do not fully prescribe the way either texts or games proceed: "Consider for example the proceedings that we call 'games'. I mean board-games, card-games, ball-games, Olympic games, and so on. What is common to them all? (...) For if you look at them you will not see something that is common to *all*, but similarities, relationships, and a whole series of them at that". If we compare two games, and then one of these with another, and so on, we find some similarities drop out and others appear. (remark 66) "I can think of no better expression to characterise these similarities than 'family resemblances'; (...)" [10].

The analogy between language and architecture is also commonly made; indeed, language is a rich and established metaphor in many creative fields (there are books on 'The Language of' Art, Images, Music, Form, Vision, and Advertising as well as Architec-

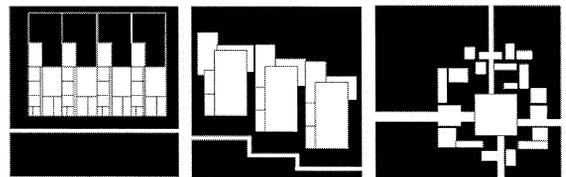


Fig. 2. 'Morphology: House, Laboratory and Centre' from 'The Language of Architectural Plans' (Rebecca Cleaves, University of Sydney).

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