Building in style

Anastássios Perdicoúlis
Assistant Professor, ECT, UTAD (http://www.tasso.utad.pt)
Affiliate Researcher, CITTA, FEUP (http://www.fe.up.pt/~tasso)

Abstract

The hands-on experience with building blocks or computer simulation can easily be guided by style — felt and understood by the team, and evidenced by everyone in the building outcome.

1 Introduction

The experience of playing with building blocks or computer simulation can be enriched through a little planning (or preparation) that can add style to the building operation, and also to the end product. Let us see how to add some extra fun to the construction games.

2 Plan of steps — feeling the style

The first thing to prepare is a step-by-step procedural plan of how to build, which accommodates the architect-cum-engineer mixed-mode nature of construction games: what to do first and what to expect, what to do next, etc — as in Figure 1.

![Diagram](image)

**Figure 1** A step-by-step view of the building process — good to have, even in a game

Organising the flow of the game gives each team major advantages. First, confidence: always know ‘where we are’, ‘what we are doing now’, ‘what we are after’, and ‘what comes next’ — a style that can be felt. Then, avoid frustration: for instance, never be caught running out of blocks in the middle of the construction. And, if time counts at all, then an ‘organised style’ will be sure to bring home some extra points.
3 Specs

(a) ‘[We would like to have] a kitchen full of light and plenty of workspace.’

(b) ‘[Our family needs] a four-bedroom lakeside bungalow, surrounded by vegetation.’

(c) ‘[How about] a space-age house with a downtown view [?]’

Such descriptions can be as imaginative as one desires, and set the objectives or the specifications (‘specs’) for the construction. These specs can be issued by the judge at the beginning of the game. Then, each team can start elaborating their own interpretations, to obtain ‘better resolution’ (or more specificity) to what they are after.

4 Plan of options — understanding the style

In the next phase, each team must find out what to do (i.e. the action ‘X’) in order to achieve their specs. This is the most creative part of building: this is where the ideas start flowing, so teams must harness them appropriately. Graphical representations such as Figure 2 reduce uncertainty, enhance understanding, and avoid ‘stalling’ in the middle of the construction — i.e. save time again. For instance, two solutions and an ‘and/ or’ statement create three options for decision: $X_1$, $X_2$, and $X_1 + X_2$ (Figure 2). Knowing this, the team can (and should) decide before they start building.

Exposing the reasoning as in the descriptive causal diagram (DCD) of Figure 2 (Perdicoúlis, 2010, 2011b) takes building to a higher, more abstract level. This unusual practice for gaming creates a ‘school’ out of each team, and helps them arrive naturally to their own reasoning style that can be understood.

5 Plan of space — seeing the style

Finally, to the essence of building: this will create a style that can be seen. By now the players must be used to displaying their ideas graphically. This phase is about the arrangement of space, which is a kind of structure, and should produce the actual layout of the building. How is the space structured? How is the space divided physically? How is it united by function? How is it organised? Is this layout according the objectives/s specs?

The layout (Figure 3) is the original ‘plan’ — from plant [F], ground plan, plane surface; related to pianta [It], plan of building — referring to spatial arrangement and the structure of space (Perdicoúlis, 2011a).
Options (a) and (b) of Figure 3 offer different interpretations to the issued specs — § 3(a). The fun here is to be creative; the challenge is to keep on track — at least with regards to specs and time. In practice, instead of spending time on producing unnecessarily elaborate spatial plans, each team should always keep the specs in mind, as it is those by which they will be judged.

6 Discussion

Nowadays it is very easy to arrange space more realistically in ‘3D’, even including motion and interactivity for viewing: the traditional ‘plane’ (plan) becomes a ‘model’, and the old-fashioned ‘building blocks’ become a construction/ simulation computer game. In such an environment, teams can easily take into account and visualise aspects such as height, light sources and shades, surface colours and textures (representing alternative materials), and even take a virtual tour of the ‘constructed’ space, or rendered ‘pictures’. In the old building blocks, teams will have to use more abstraction and imagination.

As one more consideration for the ‘forward’ mode of the building operation: a number of practical issues must be thought of ahead of the execution phase — for instance, the type of building blocks (or software, in the case of computer simulation), the amount of blocks necessary for the operation, and maybe a little surplus to compensate for ‘overruns’.
For those impatient construction players who usually dive in and start building right away, their planning ‘style’ can be deciphered a posteriori — and fine-tuned even later. This would be the ‘reverse’ mode of the game. In this case, Figures 1 and 2, and even Figure 3 would have to be drawn after the building process is concluded. It is never too late to delve into methodology and the innards of style.

7 Continuation

Construction games involve both conceptual work and practical, implementation work. In real life, this is typically split between architecture and engineering. So, at some point, teams should be prepared to split and specialise — although this should by no means raise any barriers to thought!

Also regarding capacities, an opportunity comes along the building or construction games: their preparation — even as an a posteriori reflection — is an opportunity for building style: so much in the modus operandi, as in the outcomes. As in most operations, ‘practice makes perfect’, and this is quite encouraging to know.

References

