Designing by principles

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Abstract

Preparation of an action or a piece of work may start with principles, or general guidance. The passage from this generality to something more concrete requires some organisation of thought, illustrated here with an example from the preparation of the increasingly popular frameshows.

1 Introduction

Principles represent values, or 'what is important' — or even 'what is good'. In the 'XYZ' problem setup (Perdicoúlis, 2010, 2011), principles are equivalent to the concerns, or 'Y'. These principles, values, or concerns are usually established after a long experience, and they are *subjective* — that is, they vary from person to person. In this case they are issued from the perspective of an academic, with the intent to offer guidance towards formulating desirable characteristics of frameshows, and relevant action.

Frameshows is a class name for the increasingly popular computer-generated accompaniments of live presentations, often projected on walls or screens. Anyone who has ever assisted at such frameshow presentations may have wondered: 'what is the essence here'? And anyone who must produce such frameshows, must have an answer to this question. Hence, it is worth thinking a little deeper — for instance, at the level of principles.

2 Principles in practice

Three suggested principles are presented graphically at the top of Figure 1, in three statements: (a) the frameshow must be informative; (b) the frameshow must be interesting; and (c) the frameshow must be understandable. These statements form the main (or high-level) concerns of the frameshow author(s), labelled as 'Y1', 'Y2', and 'Y3'.

As a next step, we can deduce what is required for these concerns to be met if we consult our vision of a 'good frameshow' — and this is where personal experience is valuable, and marks the deductive operation and its products. For instance, in this case it is suggested that an 'informative' frameshow means that it 'has a story to tell' because this is considered to be an essential characteristic of a 'good frameshow'. This operation produces a series of objectives for the frameshow, which can be

used posteriorly (but not in this guide) as the criteria to judge whether a frameshow is good or not, or 'how good' it is.
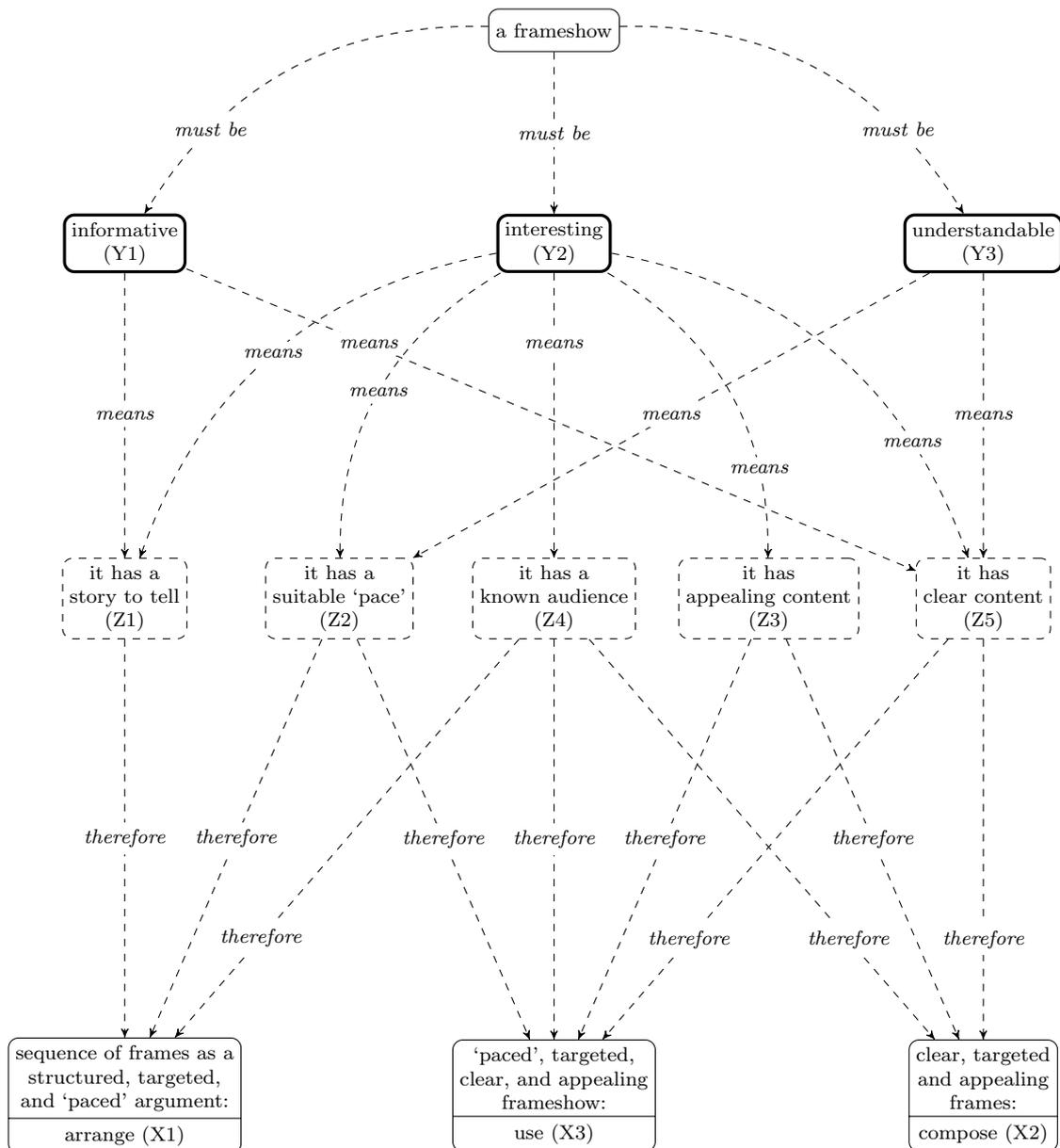

FIGURE 1   The principles (Y), their interpretation (Z), and corresponding action (X)

Actions X1 to X3 represent the three pillars of the 'SF2' systems approach: X1 refers to structure, X2 to function, and X3 to form. These three actions can be executed in any particular order, according to the preference of the author(s) — for instance, some may wish to start by conceiving the presentation (X3), others by giving shape to the storyline (X1), while others may wish to start composing the frames (X2). Indeed, these choices may reflect the preferred thinking patterns of the author(s), such as 'top-down' or 'bottom-up', their method of work, such as linear or parallel

execution, or merely their mood — for instance, 'task hopping'.

The actions X1 to X3 have been conceived in a particularly straightforward inductive manner: they are collections (or aggregations) of the deductively produced objectives. As it shows in Figure 1, all the actions receive three or four inputs from the objectives (Z1 to Z5) and reflect these requirements in their contents. Hence, the actions represent very detailed tasks, separated as the structure, form, and function of the frameshow.

More detailed action than X1 to X3 of Figure 1, as well as the simulation of that action — that is, the pathway from action to outcomes Z' to concerns (Y) — are not part of the principles. Rather, these are to be defined upon deployment of frameshows, and this is how diversity is produced in practice. The next sections provide some considerations regarding deployment, organised in three channels corresponding to X1 through X3, or as structure, function, and form (SF2).

3   Sequence

The 'story' to be told — or the 'message' to be conveyed — by the frameshow can be presented in a variety of ways, as deemed suitable for the audience, the subject, the tradition in the field, or as pure experimentation. Alternative patterns of information flow (and hence 'frame flow') include a single linear thread of information, parallel threads, 'flashback', or more complex patterns.

Another important aspect of information flow is the 'pace', or how fast information is being conveyed. This may be adjusted principally for the time allotment, and then for the audience, the subject, tradition, or any experimentation.

Finally, the argument of the 'story' can (and should) be outlined or drafted using a 'storyboard', an index, a table of contents, or a more sophisticated flowchart — for instance, like Figure 1. This outline containing the parts and links of the argument can be later 'fleshed out', and developed into the full frameshow.

4   Content

The time allotment, the frame sequence, and the 'pace' determine the number of frames to be prepared. Formatting these frames is a question of personal choice, but there are (digital) typography rules to be followed, as they have developed over the years (The University of Chicago Press, 2010; Lamport, 1994; Mittelbach et al., 2004; Kopka and Daly, 2004; Tantau et al., 2012). This covers issues such as colour schemes, fonts, layout, and scale.

Of special consideration are text and 'graphics' — the latter including all kinds of illustrations or images. Frame authors (or 'designers') must be aware and decide how much text to fit per frame (information density), how to break paragraphs, make lists, punctuation, hyphenation, and orthography, depending on 'pace' of information they have decided to keep — or the effect or impression they intend to make.

According to the audience, the text of the frames is likely to include quotes (with attention to copyright permissions), or even citations for further reading. Citations can be hyperlinked to external documents or to a reference list at the end of the frameshow, while references can be formatted as necessary (The University of Chicago Press, 2010).

Graphics are typically the 'star' of the frameshow, which can 'make or break' its success. Raster graphics must be in the appropriate resolution for the projector, while vector graphics are preferred whenever possible (Tantau, 2010). Image processing is often necessary to match the frameshow colour scheme, and copyright is almost always an issue here.

5   Use

A frameshow is meant to be a visually-rich live presentation. In its most extreme forms it may resemble either a self-presented videoclip, or a textbook projected on the wall.

In live presentations, the full content of the frameshow must respect the time allotment, and this defines the rhythm of the presentation. Timing and practice avoids 'rushed' presentations, which are generally unavailing and could even be frustrating for all.

Built-in navigation is a good help to the presenter, and specially appreciated in complex frameshows. However, pre-defined navigation sequences reduce the flexibility of the presenter — unless there is an 'override' mode to re-gain control.

6   Discussion

Besides the above considerations regarding structure, form, and function of frameshows, a number of cross-cutting technical issues must be often taken into consideration. For instance, the choice of software (brand and/ or product) may define whether the frameshow will be in a raster or vector format, with consequences on the liberty of frame size and/ or quality, and the possibility to send files for projection.

Assisting at many frameshow presentations may be 'good' or 'bad' news, depending on the quality of the frameshows: following the logic that 'a lie told many times becomes a truth', many bad presentations may well establish the norm for what a frameshow should be. The principles put forward in this guide are issued with a personal — yet global — vision of what is important in frameshows, and are complemented by a number of criteria (the 'Y' elements of Figure 1) that can be used as a check for the quality of future frameshows.

7   Conclusion

Three basic principles are issued for the preparation of frameshows, followed by a brief elaboration of relevant objectives and action. Personal interpretation is required before deployment, and freedom is not limited in this respect. Personal style matures with time, but mainly by thinking and through conscious practice.

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