Editorial

The fourth dimension for Interactive Cardiovascular and Thoracic Surgery – on-line video brings life to publications!

Illustrations speaking for themselves can be essential for explanation of complex phenomena in scientific publications. Although almost anything can be described precisely and in great detail with perfectly chosen words, provided they are used with flawless grammar and syntax, it cannot always be taken for granted that the author’s imagination matches with those of the individual readers. The flavour and weight of a specific word, and even more so, certain series of interconnected words, may be influenced by the personal experience (episodes or accidents) linked to them. This is not exactly the scenario preferred in science, where the common goal of reporting admittedly is to allow for generation of reproducible result, provided the directions for use are carefully followed.

Considering such difficulties in assuring full comprehension by wording, it comes as no surprise that the power of illustrations has been recognized a long time ago. As a matter of fact, illustrations have been around before the invention of characters, and many early characters were derived from graphic representations. Since the introduction of the printing machine, the reproduction of illustrative figures has been constantly improved. Over the last few centuries, the development from wood cut to copper plate engraving, steel engraving, lithography, photo-type, etc. has allowed not only for increased precision of the reproductions, but also ever larger print runs. Likewise, the beautiful, but very demanding hand painting [1] for manuscripts (in sensu strictu) has been replaced by the routine colour printing we are now used to, not only in scientific publications like ‘Interactive Cardiovascular and Thoracic Surgery’, but also (with somewhat less precision) in our daily newspapers.

Representing cardiovascular and thoracic surgical procedures with one sketch is admittedly a higher art. Usually, we need a series of sketches in order to be able to follow the description and to grab the essentials of a new surgical procedure. If the topic to be exposed is a difficult one, it may well be that the number of sketches becomes too big for straight comprehension. Likewise, the standard representations of complicated geometrical configurations based on a few projections, may be difficult for direct mental assimilation, despite the fact that in theory all the necessary information can be made available using this technique in conjunction with proper labelling referring to a system of co-ordinates (x/y/z). Fig. 1 is supposed to depict a schematic view, of an anatomical structure most familiar to cardiac surgeons. Here, a selection of additional views would certainly help for proper identification. However, your Editor has opted for a short video sequence (Video 1\(^1\); a video clip can be viewed at http://www.icvts.org/elan/LvS_video1.avi), which enables not only to view the anatomical structure with two rotations, but also to identify it properly, and to put it in the correct position, just in time. As a matter of fact, the sequence shown represents the course of most open-heart procedures (congenital and valvar) which are usually initiated on the left (see also Ref. [2] with one video sequence), and completed on the right prior reperfusion allowing for beating and finally taking over the entire

\(^1\) A panoramic view or like here, a number of rotations and sequential add-ons provide additional insight to an assembling problem rather difficult to describe with a few words, if the primitives required are all different in shape and size.
work load (see also Ref. [3] with three video sequences and Ref. [4] with two video sequences). *Interactive Cardiovascular and Thoracic Surgery* encourages submission of manuscripts emphasising the challenges related to the fourth dimension, i.e. time, by adding complementary video sequences.

Obviously, timing is everything that matters, not only for the heart, lung and blood at [www.icvts.org](http://www.icvts.org)!  

Appendix A: Disclaimer

Neither the authors, nor the publisher nor the European Association for Cardiothoracic Surgery warrant that the data files are free of defects, or that the documentation is accurate. Neither the authors, nor the publisher nor the European Association for Cardiothoracic Surgery are liable for any damage of whatever kind sustained through downloading and/or using the files. By downloading and/or using the files, the reader, acting as user of an electronic publication, agrees to the above terms and conditions.

References


Ludwig K. von Segesser*

*Department of Cardiovascular Surgery, Centre Hospitalier Universitaire Vaudois, Lausanne, Switzerland*

---

* Tel.: +41-21-314-22-80; fax: +41-21-314-22-78.
  
  E-mail address: ludwig.von-segesser@chuv.hospvd.ch (L.K. von Segesser).