

International Encyclopaedia of Systems and Cybernetics, second edition¹

Edited by Charles François

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The first edition of Charles François' Master Work, "International Encyclopaedia of Systems and Cybernetics," was published in 1997. I reviewed it in this Journal in 1999 (Glanville, 1999). The first edition was itself an extension of an earlier publication with 475 entries, *Diccionario de Teoria de Sistemas y Cybernética*.

The essence of my review of the first edition was to express thanks for that enormous and remarkable work: a true labour of love and a vital element in the development of cybernetics and systems. It is an astonishing achievement of one man working doggedly and diligently with affection and respect for his work area, studying texts in many languages and from many different cultures: a task that perhaps only François could undertake. I wrote my review in the context of an exploration of the notion and origin of the encyclopaedia and how that forms a view of knowledge that is built into it.

Now there is a new, second edition which I have been invited to review. And the inevitable question is what can I review (what is there to write about)?

New?

Let me start by talking about what's new.

Firstly, we now have two volumes. These volumes are slightly thinner than the single volume of the first edition, and the type is spaced more generously giving a more pleasant and much easier to read appearance. This is enhanced by the choice of paper: a polished and bleached paper rather than the possibly more ecologically correct original. (Further indications of the scale of the Encyclopaedia are the 61 pages of bibliography, including an almanac of journals; and 13 pages of index people referred to, listed in three columns per page!) We too easily ignore the importance of the physical appearance—the presence—of a book. The first edition was, in retrospect, difficult to read because of the density of the type and the paper quality. This failing has been corrected.

Secondly, there is a rounding and enriching in the entries. I'm just as much an individual user as any other, and I think this is a moment for me to talk from an explicitly personal point of view. It's hard to consider the whole Encyclopaedia, so

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(for my sample) I have dipped into areas that I'm most interested in (and, paradoxically, probably least need the Encyclopaedia for!) to sample the improvements in this second edition.

There is, for instance, an extensive entry on *Deconstruction* in the new edition, missing in the first edition. What is interesting about this entry is that it specifically shows the extensive similarities between *deconstruction* and *second order cybernetics* (which are pretty much contemporaneous), a link often claimed by cyberneticians but generally ignored.

The entry on *Objectivity* has also been expanded to integrate the constructivist and second-order cybernetic perspectives. This emphasises the link with the Encyclopaedia's entry on *Ontological skepticism*, giving a historical continuity while not reducing the radical content of these points of view.

Equally, the entry on the *Observer* is improved by implicitly linking the role of the observer to that of the controller and by strengthening the connection with criteria of validation and selection that even classical observers use. However, the (immediately preceding) entry on *Observational language* remains unchanged: an already strong entry which (as with the entry on *Deconstruction*) makes links between cybernetic thought and French philosophy during the last half of the Twentieth Century (in this case, Foucault).

The entry on the *Black Box*, which might perhaps be considered as a basic cybernetic method (there is a separate entry on *Black Box method*) has been expanded, too, to reflect *second-order cybernetic* understandings of *observing*. Thus, the actuality of the purported contents of the Black Box are allowed to be unknown and unknowable. This reflects the transition of our understanding of the Black Box from being the mechanistic device that was used by, for example, B.F. Skinner, to a means for making descriptions. Without this transition, several earlier cybernetic luminaries would have remained deeply unhappy with the notion. In particular, I remember the reaction of Sir Geoffrey Vickers to the early Black Box notion. He would have been much happier with the revised entry in this edition.

Thirdly, I should mention the introduction. In the second edition of the encyclopaedia, there is a new introduction to the (original) introduction in which François talks about his intentions in developing the Encyclopaedia. This provides a lovely example of how this work can sustain individual learning: even the editor is learning! As to the original introduction: just read it! It is, amongst other things, a valuable characterisation of cybernetics and systems.

Improvement?

Is this new edition an improvement? The answer must be an emphatic yes. The first edition was magnificent, but there were gaps and, occasionally, imbalances and omissions of representation that resulted from too narrow a view. Understand, this is not intended as an attack of any form on François: Probably nobody else could have managed the initial task so well.³ But what the first edition gave us, as added value,

was a catalyst: a catalyst to enrich. Many people wrote in with suggestions for areas that they felt were either missing or inadequately discussed, and in the seven years between editions François has evaluated and then incorporated these suggestions. This both enriches the material covered (requiring, as mentioned, two volumes and an increase of 75% from 423 to 741 pages, albeit some of this results from the improved layout), and reflects the cybernetic origins of the work, for now it is explicitly a product of learning, albeit an unusual, collaborative type of learning.

It has also acquired an editorial board. This is an important step by François that ensures the continuation of the Encyclopaedia. (François recently celebrated his 80th birthday, marked by the publication of a festschrift edited by his friends and colleagues Ernesto Grün and Eduardo del Caño (2003). While he shows no evidence of slowing down, succession is an important and long term concern, ignored at peril.) The editorial board and the moves to install a new editor inform us that the Encyclopaedia is here to stay and will provide a continuing opportunity for group learning among cyberneticians and systems scientists. My personal communication with the editor confirms these points.

Buying?

Should you buy the Encyclopaedia? And who would you be, who might buy it?

At €350, this is probably not within the budget of most individuals, which is a shame. For this is a wonderful research tool. But certainly it is, I believe, indispensable for all organisations—universities, companies, governments, research outfits—that work with cybernetics and systems, not only for what it says, but also for what it opens up: the enormous range of sources (many from the non-English speaking world); and the variety of interpretations that are acknowledged. In a sense many entries are written as mini-theses in which the strand of ideas and the debate between these ideas is used to provide a rich overview and, sometimes, a well argued (and surprising) resolution.

It is to be hoped that one day (soon) this work will appear on the web. This medium is already implicit in the Encyclopaedia where bold text is used to show related entries that the reader may link to (hyperlinks in print) and where a classification system partitions entries in an alternative way to alphabetic sequence. A web version might make it easier for individuals to afford the Encyclopaedia. It would certainly make the already implicit process of moving across references easier, although there is something rather satisfying about leafing through pages and flicking back and forwards, comparing. And it would make the role of the Encyclopaedia as a collaborative effort in constant expansion ever easier and more responsive. If the editors of the *Oxford Dictionary of the English Language* have decided this is the way forward, it would be a pity if the Encyclopaedia of the subject that has a large

3. I should emphasise that, during the Encyclopaedia project, François has frequently spoken of it at conferences and has always invited help in building it. So the first edition is not quite such a solo effort, and the change in collaboration I point to in the second edition is not as dramatic, as I paint it.

responsibility for the development of the means that make this possible were not to follow the same path—the path it had itself made possible!

And what else might be added? To my mind, the one single big omission is people. Of course, some will argue that an Encyclopaedia is not a place for people but for the contents of its subject. However, cybernetics (in particular) is interested in the included observer: to be true to its subject, then, the Encyclopaedia should include material on the authors cited, as well as material from those authors. I think I would find even greater use for the Encyclopaedia if it contained material such as is found on the ISSS site in the luminaries section.

Meanwhile, we continue to owe Charles François an enormous debt of gratitude for what he has inaugurated and achieved, and special thanks for caring enough about this as an endeavour in cybernetics and systems to make sure of a succession. Not all those who have made important and significant contributions have cared to place the future of the subject above their own need for adulation.

References

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