16 The 3 Cs of Open Research: Canalization, Communication and Collaboration

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If we look retrospectively, the current trends in the field of science are now making an enormous effort in constructing a more open research network in comparison with the seventies or eighties, where only the elites could access prestigious journals. The big deal in order to break this barrier has been, in the last three decades, the way in which the science—and its production—could be more tangible to the end-user.If any human activity were engaged in breaking down barriers, it would be science. But the goals seem to be harder when the obstacles are within. The idea of effective open research, capable of including all the actors, is a matter that involves the complete scientific community in a permanent debate about how to manage some weak points. Here we examine them.

1. Canalization of the Information. Pay-Per-View vs. Paper View

Basically, an open access journal provides online information which is free of charge for the public. If this 'online information' concerns scientific results and 'public' means the investigators, generally an academic institution pays an additional fee. It may sound unbelievable, but many scientists do not know that their institutions negotiate these licenses. At a glance, open access has been led the governments—not only to see where the results of their funds are, but also whether these outcomes are available to the educational institutions sustained by the same governments. In addition, open access contributes to accelerating investigations, making visible the findings which might be situated in the confines of the globe. Does this circle close harmoniously? Apart from the good, open access has its bad. While many open access journals are careful and rigorous in their publication processes, some others are of dubious origin—with predatory intentions, including academic journals. They try to persuade readers and researchers to publish, offering them the advantage of open access. As a result, papers get published without a critical look. This situation is harmful for the advancement of science.

2. Communication of the Information. English Language: The Language of Science

If we were in the late 18th century and dressed according to that time, on board an iconic transatlantic ship, we would have communicated in French. However, in the 21st century, it is a fact that French has definitely lost the language culture battle. Nowadays, more people speak English as a second language than native English-speakers who speak it as a first language. Is this good news? At least for science it is. Then, the composition of this place transports me to a room, where Asians, Africans, Caucasians and Hispanics amongst others understand the same concepts and exchange opinions with the speaker who gives us his dissertation in English. At the end of the day, the relaxed social meeting in the mezzanine level of the hotel happens without any cultural impediment: the verbal communication has been perfectly naturalized. It is so taken for granted that English is the language of science that we do not reflect even for a while on the powerful meaning of communication.

3. Collaboration through Information: The Bridge of Sighs in the Scientific World

Finally, the importance of communication strengthens peer collaborations. Nevertheless, this is not taken for granted everywhere. There are considerable serious limitations for scientific progress in middle-income countries. Only those underdeveloped countries that assume the transparency of including clear and targeted scientific programs in their policies will be considered as a part of extensive consortia networks. An example of this is Horizon 2020 which, apart from facilitating open access research, extends the opportunities beyond the frontiers of the 'old continent'. This means a blunt case of openness to knowledge and innovation. Science is a social phenomenon; it is not an individual construction. Communications and collaborations are both social phenomena in this human activity as well. If we do not have a common understanding of what is necessary in order to tear down the walls that encloses open research, then the global benefits will be only circumscribed to those countries and companies that guard the knowledge as if they were the ´Knights Templar'. Consequently, the potential benefits will not be global.

In conclusion, I do believe that what is mentioned here as the 3 Cs are the global benefits of open research. Canalization of the communication. Communication for collaboration. As the legend of the Knight Templar tells, we also have a 'treasure' to protect, contributing to an inclusive, effective and open research.