

EDITORIAL

The hunted hunter. SECOT needs a refoundation to face the fourth industrial revolution[☆]



El cazador cazado. La SECOT necesita una refundación para afrontar la cuarta revolución industrial

Scientific societies are organisations that offer specialised knowledge, the intangible good that is the most prized in all economies. Some consumers are attracted to what is offered and some suppliers offer the goods in question.¹ The most distinctive peculiarity about scientific societies is that the consumers and suppliers are the same individuals, and they are also the owners of the organisation. Although this is a closed market, the exchange of knowledge means that it grows to be larger than the sum of its parts, a holistic entity that is known in economic terms as a *comparative advantage*.¹ To take a familiar example, in a microeconomy such as a surgical department, specialised production makes it possible for the results to be greater and higher quality than would be the case for a single production line: moving patients between specialised units, such as those which centre on the hip, knee or spine, to mention just a few, means that operations are shorter and give better results that are longer-lasting and more economical.²

In business economics specialisation and internationalisation are the foundations of growth: the quality of the offer is improved by specialisation, and the market is enlarged to increase the number of consumers.² This also occurs in the “scientific market”, where no other institution has produced and distributed specialised knowledge to the same extent as scientific societies. Medical associations, professional unions or hospital corporations have never had the aim of producing or at the least distributing specialised useful knowledge.³ Therefore, as scientific societies exist in a closed market economy, we could say that they have been working as oligarchies composed of themselves. This has

made them less dynamic; given that they dominate the market, why improve? Nevertheless, the new technologies now offer high quality specialised knowledge. Competition has emerged in the form of web and corporate group pages that have an easy, cheap and appealing format, and they deliver their goods instantaneously.

Scientific societies have other special characteristics that weigh them down considerably. On the one hand, the suppliers of knowledge are sometimes stratified within their category without any objective measurement of their worth. They are classified more according to a range of subjective personal relationships, and they do not always take consumer expectations into account. The consumers too are, like the suppliers, owners of the organisation, this being a characteristic of oligopolies. On the other hand, nor has the medium changed in a way that would fit with the advantages arising from progress in civil society; i.e., the format in which knowledge is offered has not kept up with technological innovations which add to consumer convenience. Analysed in economic terms, neither the suppliers nor the consumers are satisfied with the product or how it is consumed. Nor has technology given rise to any change in the standard form of communicating knowledge. Paradoxically, in economics there are few doubts that it is precisely human capital and technology which form the basis for quality and the future of any company.^{1–4} It can therefore be said that scientific societies have a mistaken attitude and therefore a poor future as organisations which offer services.

Regarding human capital, although there are large numbers of people who could offer knowledge, due to company (Society) organisation they are ignored. This leads them to feel frustrated and under-valued, reducing their feelings of belonging, and there is also the cost of the lost opportunity which this represents for the collective as a whole. The failure to make use of technology also gives rise to an effect

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that is hardly acceptable: while the costs of producing the good, knowledge, are zero given that it is obtained by simple barter for another similar item, resources are dedicated to logistics. This is alien to the financial control applied in modern businesses, where the aim is to reduce outgoing monetary flows, with a strong emphasis on cost control for everything that does not directly affect production of the good in question. Cost is not cut for aspects that do affect production. A simple example may be found in high quality car manufacturing, where it would not be prudent to reduce the quality of the bodywork or engine components. Nevertheless, company management or its marketing techniques could be reorganised, as although they are very useful for commercialising cars, they do not affect their quality.

However, scientific societies have another very important drawback that aggravates the ones described above, affecting their identity and aims: their financing. Given that the fees paid by their members do not cover their costs, even though they work in a closed market they have to seek financiers in the open market who are prepared to supply resources, but under the same oligarchic rules. Paradoxically, in this other market which is considered to be free, there are companies that also have this power. Thus financing conditions include a reduction in the freedom of production for scientific societies; in other words, the knowledge they produce is partially influenced by their sources of finance.³ This is the same attribute that characterises the working of scientific societies themselves, even though they are in a closed market. The hunter has been hunted.

With the current model, there are no possibilities of change within this scenario, and scientific societies will therefore turn into organisations that, rather than making science more democratic by spreading knowledge, will simply propagate and justify tendencies that are really controlled by financiers. If so, they will eventually fall into an irrational path that may lead them to disappear due to loss of their own legitimacy.

However, it also has to be said that scientific societies are not the culprits here but rather the victims. The majority of their members are employees of public or private institutions or insurance companies, with complex labour relationships that do not always supply their workers with knowledge. The healthcare market accepts what would be intolerable in other sectors: companies leave the training of their employees to their suppliers. Large corporations, investment funds or even worse, public administration managers, are only interested in the present. They have no plans to make the healthcare system viable and sustainable, leaving training to their suppliers who often favour more expensive treatments that will eventually be paid for by the employer. This surrender of functions has created a perverse pattern that closes a vicious circle, and this has to be reversed.

If we analyse the circumstances described above and observe the current situation of the Spanish Society for Orthopaedic Surgery and Traumatology (*Sociedad Española de Cirugía Ortopédica y Traumatología*) (SECOT), we may conclude that it needs to be completely reformed. The SECOT is a company that creates and distributes knowledge, where the experts who do so are not classified according to an objective measurement of their human worth. The Soci-

ety is not aware of the characteristics of the demand by its consumers, it spends its funds on logistics, its distribution is obsolete and it depends on donations rather than transactions for its income, so that it is in a very weak economic situation.

It would be logical to think that the SECOT should prepare a census that would objectively classify the human capital that provides knowledge, as well as taking advantage of the massive opportunities arising from the fourth industrial revolution.⁵⁻⁷ This would definitively lead to higher quality production and a lower distribution cost, and it would also open up the route to independence through economic self-sufficiency. The virtual world makes travel unnecessary and favours the supply of knowledge. It matches supply to demand, making it easy to access knowledge and offering facilities that are impossible in face-to-face transactions.⁵ The virtual world also makes it possible for us to broaden our market and become international.⁵ This does not involve ceasing face-to-face meetings, but rather gradually changing a very old way of selecting content – in which a small group decide, and the content is supplied by individuals selected by the same group – involving an obsolete procedure with tedious and very expensive travel that fails to reconcile work and relaxation.⁵

The SECOT faces two conceptual challenges in the coming years. It has to offer knowledge content that satisfies the needs of its members, some of whose needs are expressed now while others are not, due to a lack of awareness that is ignored. It also has to include scientific progress, in a technological medium that is high quality, easy to use, fast, convenient and cheap.⁵ The first objective requires the objective classification of a "census of experts", while the second has to make use of the advantages of current communications technology.⁴ To this end it has to gain in transparency and governability, within an ethical context that everyone knows and respects.

However, the SECOT has to take advantage of the facilities which other institutions in this area possess, in the form of effective agreements with national and international scientific societies, universities and public institutions in other sectors. This will create economies of scale that make its actions more effective while also reducing its costs, and, at the same time, facilitating the multi-institutional accreditation of the activities it undertakes. As well as bringing down costs this will also add value. If the SECOT is to survive its current cost-effectiveness ratio has to be turned around, and the fourth industrial revolution cannot be ignored: otherwise the SECOT will become an archaic organisation that lacks value and legitimacy.

References

1. Krugman P. *Essentials of economics*. New York: Worth Publishers; 2016.
2. Gueraldo E. *Gestión Clínica. Tratado de Cirugía Ortopédica y Traumatología*. Madrid: Elsevier; 2018 [in press].
3. Munafò MR, Nosek BA, Bishop DVM, Button KS, Chambers CD, Percie Du Sert N, et al. A manifesto for reproducible science. *Nat Hum Behav*. 2017;1:1–9.
4. Gueraldo E. Scientific societies and the third industrial revolution – the future role of the OTC. *Injury*. 2017;48 Suppl. 6:S1–4.

5. Montagna JA. The Industrial Revolution. Yale-New Haven Teachers Institute. Yale University; 2016. Available from: <http://teachersinstitute.yale.edu/curriculum/units/1981/2/81.02.06.x.html> [accessed April 2018].
6. Rifkin J. The Third Industrial Revolution; 2018. Available from: <http://www.thethirdindustrialrevolution.com/> [accessed April 2018, May 2018].
7. Schwab K. The Fourth Industrial Revolution. Danvers, MA: Crown Business, Penguin Random House; 2016.

E. Guerado
Presidente de la SECOT
E-mail address: eguerado@hcs.es