

## What is the role of the Social Sciences?

Kirman, Alan <sup>0</sup>

<sup>0</sup> CAMS-EHESS, France

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ABSTRACT

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Which disciplines are included in SHS and why? A weakness in our system is that we are too inclined to classify problems into their "appropriate" disciplines. Yet the major questions facing our society are not defined in that way. Practically the first question that is asked when evaluating a project or a publication of an individual whether in the social sciences and humanities or in the so-called "hard sciences" is "is she a good ----?" (fill in the blank with, historian, sociologist, biologist, mathematician, political scientist). One rarely hears, without any disciplinary allusion, "Is this subject, interesting, does it expand our horizons, does it discuss a question from an exciting and stimulating angle? If convincing, might it change our mindset?"

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To take my own discipline economics, when I was a young professor I was in a Department of Political Economy and that name was still used in many universities to describe what we would now call "economics". But, as a discipline it has never known where to settle. Consider Walras' claim for economics at the end of the 19th century, that

"All these results are marvels of the simple application of the language of mathematics to the quantitative notion of need or utility. Refine this application as much as you will but you can be sure that the economic laws that result from it are just as rational, just as precise and just as incontrovertible as were the laws of astronomy at the end of the 17th century."

Yet, as one of the great economists of the 20th century, Frank Hahn said,

"But while there will be work for the computer scientist, I very much doubt that economists will be able to establish general propositions in any but very special examples"

Biology has shifted from organismic, to molecular and now to systems biology and is hardly recognisable as the same discipline although keeping the same name.

All of this has echoes of Jacques Barzun's House of Intellect, clubs of intellectuals gathering under labels and protecting themselves from outside attack by developing their own jargon. The very fact that we identify "the social sciences" suggests that they have an identity which separates them from other "sciences" yet so many of our current problems such as the climate, pandemics, geopolitical conflicts involve all fields and make such a separation undesirable.

Analysing the complex adaptive system within which we live requires contributions from many disciplines at very different levels from fundamental research to practical and pragmatic measures. There are already institutions which are developing this sort of open-minded and imaginative approach and our purpose should be to develop a less parochial organisation of our scientific endeavours and one which is characterised by more mutual respect among the participants.

This may mean lessening the specialisation of our students at least at the earlier stages of their studies. This, in turn, would provide a body of people, who, while not being necessarily "experts" in different fields can dialogue effectively with those who can claim to be experts. Furthermore, this would lessen the temptation for governments to subcontract important analysis of policy issues to consultancy firms. The broader the culture of those involved in decision making the more beneficial will be their capacity to direct policies towards those which are beneficial to society.

But a fundamental change of approach is needed in the way that we try to solve problems. It is sometimes argued that the way to solve important societal problems is to break them down into small components and then deal with each component separately. In other words the solutions to each component can provide an adequate solution to the problem of the whole. This will work for some rather simple structures which are decomposable and where the relation between the parts does not change their behaviour. Unfortunately, that is not the sort of world in which we live. In our world, most aggregate behaviour emerges from the interaction between the individual components and between those components and their environment writ large.

What is more, the interactions create feedbacks as one component reacts to the influence of another. The fact that the financial system is so volatile and the network that links the institutions within it so fragile has more to do with the structure of that network than with the weakness of the institutions involved. Once again we should not lose sight of the fact that interdependence is a fundamental and increasingly important feature of our socio-economic system. To quote John Dunne, "no man is an island unto himself". This interdependence has been brought into sharp relief by the covid pandemic where suddenly the importance of proximity and transmission became paramount. The

consequences of that phenomenon for global supply chains was a reminder of this. But, it is not enough to assert that interdependence is important and then to analyse the system on the basis of economic models for example which place too little emphasis on the system as a whole. Once one adopts a systemic approach things which were treated as "exogenous shocks" are seen to be emergent phenomena of the self organisation of the system.

However, taking an overall view of the global system and seeing each component as an intrinsic part of that system rather than an isolated entity requires a shift in the way we educate social scientists and in the way that we encourage scientific progress in its broadest sense. Our present system encourages social scientists and the public at large to "listen to the science" however broadly defined, rather than to "engage with the scientists". Changing this will involve modifying some of the deeply engrained attitudes both on the part of "the hard sciences" and of the "social sciences and humanities". Yet the contributions of both are necessary if we are to make real progress in attacking the very real global problems with which we are faced.