Systemic Complexity for human development in the 21<sup>st</sup> century

Systemic Complexity: new prospects to complex system theory

7<sup>th</sup> Congress of the UES Systems Science European Union Lisbon, Dec. 17-19, 2008



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# Turning Complexity into Simplexity Closing Address

#### Hermínio Duarte-Ramos

Emeritus Professor, Faculty of Sciences and Technology, New University of Lisbon Congress President

It is gratifying to reach the end of this congress, for the last three days have been a great step forward. Thank you for making it possible.

As members of the systemic complexity community, we contribute to a clear understanding of world problems, and we do it with an unswerving dedication to rigorous scientific methods and to the undisputed human right to freedom of speech. But absolute freedom of speech is problematic, because freedom has its limits if it is to be tolerable. As Voltaire noticed, though, in plain age of Enlightenment, the same cannot be said of freedom of thought – and our existence as an epistemic community is a living proof of this freedom.

An excellent factor on which to base the development of systemic complexity in this post-modern era is ethics. A key example of such conduct is the awareness, inherited from the French Revolution, that one person's right to freedom should never clash with that of another. But freedom cannot, indeed it should not, be confined to the individual. Societal systems themselves ought to have well-established structures that peacefully and liberally promote and enhance the well-being of their peoples – structures firmly rooted in the belief that freedom necessarily implies responsibility.

The economic exploitation of weaker populations by the more powerful is, clearly, a result of complex systems. But the renunciation of material goods demands humility from people, and most of us do not have that in abundance. Consequently, our societal systems seem destined to greater complexity.

In order to deal with it, we desperately need effective intercultural understanding at global level. For instance, the prevention of the spread of evil could greatly benefit from an acknowledgement of the right of all countries to partake of the free world. Global efforts such as these are the province of systemic complexity. Through it, and in congresses such as this one, we can effectively improve human development in the twenty-first century. The current European Congress on system science has,

additionally, shown that such an end is better attained when the debate is conducted on multidisciplinary terms – but, then, multidisciplinarity is the stuff of systemic complexity, for it covers many fields and specializations, many sub-disciplines and special concepts.

But progress is a double-edged sword. If, on the one hand, it depends on our capacity to focus and specialize, for that is how science progresses – by focusing our attention, choosing a method, concentrating on an idea –, on the other hand, it demands that we not lose sight of the greater problems that fall under the purview of systemic thinking. That is our *sine qua* non condition, if we are to contribute to the noble purpose of improving societal systems.

A European Congress may be viewed as an event to talk about and report on. This congress was an opportunity to network, to exchange ideas, and ask and answer questions. It was an opportunity to see how things are moving forward. I hope your return home is accompanied by a great desire to share this information.

As to the papers, we adopted an inclusionary, rather than an exclusionary, policy, in order to give voice to as many speakers as possible, talking about as many themes as possible: the theory and prospects of systemic complexity, human, social and societal systems complexity, as well as systemics and globalization.

The purposes of the Congress were several, but chief among them was, perhaps, the desire to interact with people with different views on systemic complexity. It was the desire to gather people in one place to talk and learn about systemics. And I am sure we have all conversed and become wiser. Talking or just listening to colleagues from other countries has, certainly, made us more aware of the diversity of thought on the topic of systemics. For me, the Congress was a great opportunity to learn more about systemics and complexity coming from different parts of the world.

Which is an effective way of turning complexity into simplexity!

Before we depart, I wish to thank the members of Atelier 34 for their cooperation. I also thank Ana Paula Caetano for managing the congress program. A special thanks to professor Fernando Coito, vice-president of Apocosis, and to doctor Luis Palma, researcher of the Systemic Engineering Group, for their fruitful work. To the other members of staff, thank you for helping set up this first initiative of Apocosis. We will go on.

Once again, I thank those who generously sponsored this event: the Association Française de Science des Systèmes (AFSCET), the National Energy Networks (REN), the Science and Engineering Faculty of the New University of Lisbon (FCT-UNL), and the Rectory of the New University of Lisbon. To the Dean of the Faculty of Sciences and Engineering I thank for their solidarity. To the magnificent Rector of the New University of Lisbon, professor António Rendas, I extend my deepest appreciation.

Dear colleagues, we have come to the end of the 7<sup>th</sup> Congress of the European Systems Union/Union Européenne de Systémique/União Europeia de Sistémica. I hope we succeeded in making this a successful event for the Systems Science European Union, just like I hope it will create more and better congresses in the future.

To my fellow congress participants, I wish you a wonderful trip home. It was a privilege to have you here. Please, be free, and joyful. Thank you very much.