



Toward a Trans-disciplinary Science of Society

[Inter-University Centre, Dubrovnik](#)

Monday September 1 thru Saturday September 6, 2014 – 9 am to 6 pm daily CET

COURSE CONCEPT NOTE

Rationale

Today humanity is confronted by a plethora of serious challenges – political, economic, legal, social, cultural, psychological and ecological. These challenges are complex, interrelated, and global in reach. They are a reflection of the inadequacy of current institutions and policies and at a deeper level the inadequacy of current knowledge. They defy comprehension and resolution based on the prevailing principles of social science. The specialized knowledge developed by separate disciplines is inadequate to deal with the increasingly complex interdependencies of the real world. Knowledge needs to evolve to keep pace with the evolution of society.

The evolution of a complex, highly integrated global society necessitates the development of a more comprehensive and integrated science of society. The division into various specialized fields has been a useful mental strategy for the development of the social sciences, leading to significant advances in all fields – knowledge which needs to be preserved and enhanced by future developments. Yet it is increasingly evident that a more comprehensive and integrated approach is now required. As society evolves, its different functions develop greater complexity. At the same time they become more closely and complexly interlinked and interdependent on one another. Economy today is highly dependent on the political system and laws governing the distribution and enforcement of power in society, legal concepts regarding ownership of property and human rights, public institutions responsible for the creation and management of money, rules for commerce between nations, public policies influencing income and wealth distribution, processes that determine collective decision-making, public investment in education and training, and social expectations regarding economy and the future, etc. A recent announcement by the White House of an ‘intention’ to examine measures to discourage shifting of US firms to tax havens overseas resulted in a 10% fall in market value for several large firms.

So too, the formulation and enforcement of law are rooted in the distribution of power in society, awakened public conscience, levels of education and cultural values. Similarly, the development and operation of political, legal and economic systems reflect the social aspirations of citizens, the cultural values relating to freedom and authority, the collective sense of identity that binds or divides social groupings, attitudes toward conformity and rebellion, ideas regarding the value and rights of the human being and the potential of the individual. Public opinion reflecting social attitudes and expectations has become a crucial battleground for impacting legislation related to immigration policies, taxation, labor laws, health insurance, gun control and even codes of dress. As Fareed Zakaria observed in the *Future of Freedom*, democracy as it evolved in the West was an expression of the prior evolution of social, cultural and intellectual liberalism which constitute its heart and foundation. All these factors are founded on and influenced by the ideas, ideals, aspirations, beliefs, attitudes, knowledge and skills of individual citizens.

Humanity has and will continue to learn much from the separate study of each field of social science, but the effective knowledge needed to meet emerging challenges justifies a greater effort to comprehend the complex inter-linkages and interdependencies between fields. Significant recent advances in emerging fields of science, such as the study of Systems Theory, Complexity, Information Theory, Ecology and Anticipatory Systems, also justify a more concerted effort to identify and comprehend the more fundamental principles and unifying processes common to all fields and aspects of society which serve as foundations for the growth, development and evolution of the complex living organism we call society.

Objective & Scope

This course is intended as a creative endeavor to look beyond the boundaries fixed by present concepts, theories and disciplines in an effort to make more explicit the linkages and interdependencies between different fields of social activity, to develop common terminology, to identify common underlying social processes applicable to all fields and levels of society, and to examine the prospects and requirements for evolving a trans-disciplinary science of society.

Efforts to combine and integrate perspectives from different disciplines are hindered by the absence of a common conceptual framework. This course will look for common principles applicable to an integrated science of society. It will also examine similarities and differences between the natural and social sciences; including the character of scientific laws, the place of consciousness and choice; the role of the individual human being as creator, catalyst and pioneer of social change; the need for an expanded concept of causality that takes into account the role of future anticipation as an attractor; and the applicability and limitations of systems, networks and complexity theory when applied to human beings.

Evolution of Social Science

Science is a work in progress. It progresses incrementally for decades within certain parameters and then may suddenly evolve a whole new paradigm which places existing knowledge within a wider perspective, as the advent of Relativity and Quantum Theories repositioned the principles of Newtonian Physics within a broader set of universal principles applicable to the subatomic microcosm and interstellar macrocosm.

It is not surprising that our knowledge of the physical world should have developed more rapidly than our knowledge of human society and of ourselves. The natural sciences had a 200 year head start. In addition, the evolution of physical nature occurs over eons, whereas society today is evolving at a speed which is almost visibly perceptible. Moreover, the complexity of human life far exceeds anything found in material and biological Nature. Social science needs to grapple not only with the complex interactions between material forces, living species and their natural environment. It must also account for the infinitely more varied, complex and less predictable behaviors of human beings at the level of conscious thought and feeling as well as subconscious instinct and physical movement.

Development of concepts, theories, methods and measurement in the social sciences has been significantly influenced by earlier advances in the natural sciences. Progress in the social sciences benefitted from efforts to reproduce the objectivity and rigorous discipline developed by the natural sciences. This led to the search for impersonal, immutable universal principles governing society, akin to Newton's laws of motion and thermodynamics. It also led to the emphasis on quantitative

measurements and mathematical formulations which have proven so precise and effective in the material sciences. In the process the social sciences have largely come to minimize the importance of or regard as externalities three vitally important distinctions between social and natural sciences – the reality of subjective factors, the power of conscious choice, and the relationship between the evolution of consciousness and the evolution of social organization.

Social science has also tended to ignore the unique role played by the individual human being in social evolution. In an effort to mimic the mathematical and statistical perfection of other sciences, the emphasis on mean, median and standard deviation in the social sciences obscures the fact that all significant changes in social behavior originate in the mind and action of a single individual and from there spread to the larger collective. All matter may be composed of only three types of quarks, but every human being possesses an element of individuality, creativity and uniqueness which defies comprehension and description by generalized principles. All particles may be equal, but history testifies that a single individual can change the world.

The natural and social sciences differ in other important respects. The natural sciences were born out of the search for impartial, objective knowledge of the immutable laws governing the external natural world. They were a quest of knowledge for knowledge's sake motivated by the inherent value of knowing. Only later did it become evident that the discoveries of science could be of incalculable benefit for improving the welfare and well-being of humanity. The knowledge sought by the social sciences is with regard to principles and processes created by human beings, rather than immutable laws of nature. The truths of society are expressions of human choice. Thus they are accessible to modification and improvement. The social sciences are pre-eminently a quest to better understand ourselves and to equip us with the knowledge for more successful adaptation and evolution. Thus, Karl Popper warned against a tendency toward misplaced naturalism in the social sciences. He argued that the primary purpose of the social science is not abstract knowledge but social effectiveness that benefits humanity. Recall that Adam Smith considered himself a social philosopher striving to better the welfare of society, not a scientist in quest of immutable, universal laws.

Transdisciplinarity

Interdisciplinary and multidisciplinary studies have been in vogue for more than half century. Problems are now frequently examined by groups of scientists representing different fields and applying different concepts, theories, methods, data and measures to arrive at more comprehensive and effective knowledge.

The concept of transdisciplinary science of society implies something more and different. Jean Piaget introduced the word in 1970.¹ Basarab Nicolescu uses the term to signify a unity of knowledge beyond disciplines. The International Center for Transdisciplinary Research adopted a [Charter of Transdisciplinarity](#) in 1994 which makes a vital distinction between transdisciplinarity and interdisciplinarity. "Interdisciplinarity and multidisciplinary concern the transfer of methods from one discipline to another, allowing research to spill over disciplinary boundaries, but staying within

¹ According to Piaget, transdisciplinarity "will not be limited to recognize the interactions and/or reciprocities between the specialized researches, but will locate these links inside a total system without stable boundaries between the disciplines." Jean Piaget, "L'epistémologie des relations interdisciplinaires", in Leo Apostel et al. (1972)

the framework of disciplinary research. Transdisciplinarity concerns that which is at once between the disciplines, across the different disciplines, and beyond each individual discipline. Its goal is the understanding of the present world, of which one of the imperatives is the overarching unity of knowledge.”²

This view implies that there are fundamental constructs, forces, processes and characteristics that underlie all social processes, regardless of the field and that knowledge of these common foundations can generate greater understanding and more effective applications in the real world. It is based on the premise that human society and individuality cannot be adequately understood in terms of positivism, reductionism, formalism and naturalism.

Basarab Nicolescu justified the need for transdisciplinarity to take into account the existence of multiple levels of Reality and to cover knowledge regarding the space between and beyond disciplines. Disciplinary research usually concerns partial fragments of reality related to the same level of Reality. Transdisciplinarity concerns the dynamics of the interaction of several levels of Reality which impact on the dynamics of different fragments and levels studied by disciplinary knowledge.³ Zakaria’s stress on the cultural foundations of political democracy, the impact of military power on political influence, the Placebo Effect in medicine and irrational expectations in economic behavior are illustrative of the multi-layered reality governing all social phenomena. Nicolescu also conceived of transdisciplinary evolution of the university that “can open the way towards the integral education of the human being which necessarily transmits the quest for meaning.”⁴

In the natural sciences, the laws and principles governing the interactions and relationships between particles, atoms and molecules are applied consistently to phenomena in chemistry, geology, biology, genetics, zoology, meteorology and ecology, while forming the basis for the emergence of higher order laws and principles in each field. Whereas the social sciences have yet to agree upon such a set of constructs, forces, processes and characteristics common to all human social activity.

“Transdisciplinarity complements disciplinary approaches. It occasions the emergence of new data and new interactions from out of the encounter between disciplines. It offers us a new vision of nature and reality. Transdisciplinarity does not strive for mastery of several disciplines but aims to open all disciplines to that which they share and to that which lies beyond them.”⁵

An effort toward transdisciplinarity must necessarily build on and enhance the value of existing knowledge. At the same time it is likely to also reveal value in earlier discoveries that have been discarded or ignored in the preoccupation with more narrowly concentrated disciplinary knowledge. It can also draw rich insights from broad social thinkers, such as former WAAS President Harold Lasswell, who strove to uncover the underlying processes relating social, power and constitutive processes applicable to the pursuit of the full gamut of values which define the range of human aspirations and activities.

² [B. Nicolescu, *Manifesto of Transdisciplinarity*, translated by K. Claire Voss \(Albany: State University of New York Press, 2002\), pp. 147-152.](#)

³ [Transdisciplinarity – Theory and Practice \(Ed.\), Hampton Press, Cresskill, NJ, USA, 2008.](#)

⁴ [Centre International De Recherches Et Études Transdisciplinaires](#)

⁵ [Transdisciplinarity – Theory and Practice \(Ed.\), Hampton Press, Cresskill, NJ, USA, 2008.](#)

At the same time, this effort can build on promising recent developments that have obvious relevance to many different disciplines, such as Organizational Theory, Information Theory, Systems Theory, Complexity, Ecology, and the nascent efforts to establish the discipline of Anticipation.

One possible starting point to overcoming the division and fragmentation that presently characterize the social sciences would be a comprehensive effort to identify the inter-linkages and interrelationships between fields which highlight their interdependencies. In the process we are likely to find that the solution to many pressing social challenges lies in approaching sectoral problems from a more comprehensive, integrated perspective that more fully takes into account the complex interrelations between fields and the underlying processes governing the evolution of society as a whole.

As a note of caution, the overwhelming amounts of information gathered by specific disciplines and the incommensurability of specialized language and concepts applied complicate the effort toward a trans-disciplinary conversation. This can be offset to some extent by conscious efforts to minimize the use of discipline-specific terminology and by consistent reference to real world problems and events to illustrate theoretical propositions.

Fundamental Questions

The IUC course is intended to be a collective inquiry into uncharted territory where our ability to ask the right questions is more important than striving prematurely to formulate all the answers. The course may best be defined as a set of fundamental questions that transcend disciplinary boundaries which can be examined to draw insights regarding the formulation of an integrated science of society. In preparing and launching this inquiry, it may be helpful for each of us to start by asking one or more of the following questions.

1. What are the fundamental similarities and differences between the natural and social sciences which impact on future development of the social sciences? How is a social science of conscious human beings similar to and different from the natural sciences which study the behavior of unconscious or inanimate material and biological processes? How are the laws governing society similar to or different from the immutable laws of nature identified by the natural sciences? How relevant are the premises of natural science for understanding the behavior of human beings who demonstrate unique characteristics of consciousness, comprehension, choice, aspiration, values and creativity?
2. What is the nature of the relationship between the different fields of social science that are traditionally regarded as separate subjects? How does the development of each field of human activity (e.g. law, politics, economy, education, culture, psychology, philosophy) interact with, influence and depend for its development on developments in every other field? For instance, how does the evolution of political democracy depend on the evolution of law or liberal social culture? How does the development of market economy depend on development of effective mechanisms for regulation and enforcement? What is the impact of social values and attitudes on the evolution of law?
3. What common underlying principles govern the operation and development of apparently separate and disparate fields of society? For example, what is the role of human energy, aspirations, anticipation, organization, social institutions, networks, systems, authority, communication and feedback, rights and values, culture and social constructions of knowledge, the social construction of the reality, of human nature, the social construction of the

professions have in common to all fields? What contribution can organizational and systems theories make to a conceptual framework for a science of society?

4. What is the concept of causality applicable to the social sciences? What is the driving force for human development in different fields? What is the process by which the aspiration or energy for development is converted into social capacity and power for accomplishment? What is the source and nature of the energy, forces and powers that drive human behavior and social processes in different fields?
5. What is the role of organization, systems and networks in a science of society? What is the process by which organization grows, develops and evolves?
6. What role is played by the individual in the development of society and each field of social activity? How does that relationship change in the course of social evolution? What accounts for the disproportionate power that single individuals and small groups play in the development of society?
7. What is the role of ideas and values in the development and evolution of society and by what process do they act? What accounts for their remarkable power to alter society?
8. What is the relationship between objective external social reality and subjective human perception and will? How do social and personal constructions of knowledge, variations in individual motive and perspective, differences in social and cultural attitudes and attitudes impact on the diverse operations of society?
9. What is the significance of the stages of growth, development and evolution with respect to the various fields of activity studied by the social sciences? As we discern stages in the development of law, politics and economy, are there fundamental stages in the evolution of society as a whole that express differently in each field of activity? How do changes in social consciousness reflect changes in the character of human consciousness? What is the relation between the development of personality in the individual and the development of social character or capacity in the collective?
10. What implications would an integrated science of society have on the formulation of theory, public policy and social strategies for addressing problems related to human security, governance, prosperity, welfare and well-being?

Each faculty member is invited to address these and similar questions from different perspectives and pose similar questions for consideration by the faculty prior to and during the course.

Faculty

1. **Zbigniew Bochniarz**, Economics & Business; Professor, Evans School of Public Affairs, Univ. of Washington.
2. **Janani Harish**, Individuality & Social Development, Senior Research Associate, The Mother's Service Society, India.
3. **Garry Jacobs**, Social Science & Management; Chief Executive Officer, World Academy of Art & Science and World University Consortium.
4. **Ian Johnson**, Economics; Secretary General, Club of Rome; former Vice President, World Bank.
5. **Winston Nagan**, Law; Chairman of the Board, World Academy of Art & Science; Professor of Law, University of Florida.

6. *Carlos Alvarez Pereira*, Systems; President, Foundation INNAXIS.
7. *Roberto Poli*, Philosophy & Sociology; Professor and UNESCO Chair for Anticipation at University of Trento.
8. *Ivo Šlaus*, Physics, Honorary President of World Academy of Art & Science; Vice Chair of IUC Council; Dean, Dag Hammarskjöld University College of International Relations and Diplomacy, Zagreb.
9. *Karl Wagner*, Values; Director of Communications, Club of Rome.
10. *Alberto Zucconi*, Psychology; President, Person-Centered Approach Institute, Italy; Trustee of WAAS; Secretary General, World University Consortium.

Logistics

Participants: In addition to the faculty a small group of students are expected to physically attend the course. In addition the course will be open to web participants and broadcast live with interactive audio and video capabilities. Faculty and students are requested to bring notebook computers with webcams.