



## Converting Social Potential into Social Power



Dag Hammarskjöld University College of International Relations and Diplomacy (DHUC), Croatia; Inter-University Center (IUC), Croatia; Person-Centered Approach Institute (IACP), Italy and The Mother's Service Society (MSS), India. Held at IUC, Dubrovnik, Croatia from Oct 31-Nov 2, 2016, this event was the sixth in a series of PG roundtable seminars co-organized by WUC.

The process of the generation and expression of social power is fundamental to all human activities and to social development. The Social Power Lecture Series explored the sources, expressions, determinants and consequences of the creation, distribution and exercise of social power. The course directors were **Garry Jacobs**, CEO, WUC; **Alberto Zucconi**, President, IACP, Italy; **Winston Nagan**, Professor of Law, University of Florida, Gainesville; and **Goran Bandov**, Vice Dean, DHUC, Zagreb. **Heitor Gurgulino de Souza**, President of WUC inaugurated the event. Faculty members consisted of present and former heads of academic, research, diplomatic and political institutions from around the world. Recording of the entire program is available on [Youtube](#), and interested participants can apply for a certificate of participation by [contacting](#) the WAAS administrative team.

Crises are opportunities. It is only at moments of intense crises that humanity releases revolutionary energies. These energies break existing institutions, channel energy in new directions and create higher structures of social organization. When energy is organized according to progressive higher values, it results in social evolution. How can we accelerate this process in a timely manner, without waiting for the explosion of the pent up social energies?

To answer this question and address issues related to society and social power, World University Consortium (WUC) co-organized a lecture series, in collaboration with the World Academy of Art and Science (WAAS);



**M. Đurović**

The source of social power is people. It is from people's aspiration, energy and capacities that society derives its power. When individual capacity

is organized and channeled through a system, it becomes social power. In this way, society is a huge reservoir of all our energies, skills, capacities, knowledge, intelligence and aspirations.



**H. Schopper**

Scientific knowledge has made an immense contribution to the evolution of society in the past. Scientific academies and learned societies have an

important role to play in informing the public. WAAS has the potential to play a significant role in global issues, thereby living up to its mission of leadership in thought that leads to action.



**T. Tóth**

There is an inter relationship between the cyclical crashes we witness in the economy and in the area of global security. Because of the continuum

between the economy and security, we cannot afford anymore crashes emanating from the security area. What is needed is an immediate and ambitious New Deal.

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**J. Caraça**

The grand transformations of society take place during periods of great uncertainty and complexity. New knowledge is necessary to reestablish a sense of new order. The times today are again pervaded by great uncertainty and especially complexity: everything is connected, and the culture of separation no longer works globally.



**B. Gills**

Crises are not fixed or static, they are fluid and subject to change by the actions of people. Once we understand the sources and negative elements of the threats that are in the social order, we reach a whole new level of awareness, which leads to transformative action to change the condition of structures and of existence.



**S. Bahia**

Our common core values must be perceived. Human development requires unselfishness, and human rights have their roots in our humanity. Altruism necessarily arises from the identity of individuals. It is necessary to identify the essential traits of common mankind in each of us. This is the essence and goal of Social Power.

We have created formal social structures by channelling powerful energies over centuries. These structures meet the needs of creation and sustenance of a stable secure society. Today, we see unprecedented capacity for accomplishment in every field of social life. Never before has humanity possessed social power of this magnitude. Never before has power been so widely distributed within society. The average citizen today enjoys freedom, privileges, comforts, and conveniences unavailable even to the wealthiest and most powerful in earlier centuries.

At the same time, humanity also faces multi-dimensional challenges. These challenges have shaken the entire global world order. They challenge prevailing ideology in politics and economics. These threats defy solution by any of the traditional piecemeal methods. But if crises are opportunities, today we are presented with the greatest opportunities than ever before. The question is, how can we convert the explosive energies to build structures that never existed before at levels of social reality where society has never been organized before? Where can we find the power, capacity and knowledge needed to address these challenges effectively? That was the overriding question behind the Social Power Lecture Series.

The event examined the different forms in which power develops and acts, including military, government and political parties, law, commerce, communication, transportation, media, religion, technology, science and education. It also studied the process by which social potential develops, gets organized and channeled for social progress, as well as the process by which power is usurped or diverted for the benefits of smaller elites. The practical aim of the program was to identify ways in

which the enormous untapped and underutilized social potential can be more fully converted into effective power to address pressing global challenges and enhance human security, development, welfare and well-being.

After years of research and discussion, WUC has concluded that the world needs a new way of thinking and a new paradigm of social development. New policies and institutions are not enough. We need a new conceptual framework to understand the world we live in and what is happening to it. Apart from a change in public policy, responsible private initiative, and effective institutions for global and national governance, we need more—a radical change in the content and pedagogy of education, a new theoretical understanding of the world, a reexamination of the way we use our mind, and the fundamental thought process we employ to analyze and address our problems.

Society possesses immense power to accomplish its goals. This power stems from its formal and informal sources of knowledge, human initiative, social organization, institutions, technology and skills. It issues out of interaction, cooperation, coordination and organization among individuals. The capacity of humans to relate to each other, release and channel their collective energy effectively is the source of all the powers of society. They cannot be created by individuals functioning in isolation. Language, currency or communication tools are useful only when they are accepted and used by all. Similarly, individuals wield any power only when they are part of a collective, and tap into this collective power. This social power grows exponentially as society evolves. This is seen in its capacity to move people, information and money at high speed around the world. It is seen in its





**Z. Bochniarz**

Money is a uniquely effective instrument for the inter-convertibility and exercise of social power.

The wider distribution of money becomes a spur to more rapid and equitable social development if it provides more well-designed public goods, and builds better and more accessible infrastructure.



**W. Nagan**

Ultimately, it is the human individuals acting alone or in combination with other individuals, that form the essential foundation of power in society.

Participators can use wealth to access power and all the other values as bases of power.



**J. Engelbrecht**

Society is a network of individuals and some individuals have more links than others.

These individuals are the informal leaders and independent thinkers. As Joseph Rotblat, the Nobel Peace Prize awardee, said: those who know more, have also more responsibility. This is relevant to WAAS.



**A. Zucconi**

Power is the capacity to act and impact, it is energy. It is neither positive nor negative; depending on how, when and where it is used, it produces positive or negative results.

Personal and social power are not two separate entities, they are intertwined. Power continues to expand and vary with the changing of society.

unprecedented capacity to impart a wide range of education to members of the society. Globalization, internet and other technological advances have multiplied the forms and power of social potential. As we convert only a small fraction of sunlight into solar energy, only a small fraction of social potential is called into action. Society possesses a vast underutilized potential which can be tapped to further enhance human security and well-being.

We can better use social power if we understand it clearly, see how we are utilizing it, and learn the process of utilizing it more effectively. The strength and effectivity of this power depend not only on how much of it we generate, but also on: 1. How we distribute it; 2. What forces restrict the distribution; 3. What is the impact of its distribution; 4. What strategies can be employed to develop and distribute that power for greater benefit. The wider and more equal the distribution of social power, the greater the stability and prosperity of the society and the well-being of the members.

The social potential can be thought of as a huge reservoir of energy, like the radiation pouring on earth from the sun. But the benefit we draw from that energy depends on our capacity to capture, transform, direct and channel that energy for specific applications. Social organizations are the means we employ to channel human energies and convert them into effective social power. The social collective generates and exercises power through the authority of formal social systems and institutions—national governments and international organizations, laws, courts, military, religion, universities, research institutes, financial institutions, companies and NGOs. It accords them a formal sanction to legally exercise political, economic, social and other forms of power on behalf of and for the welfare of the collective. Rapid advances in the development of social institutions in all fields have played a critical role in multiplying the power of modern society.

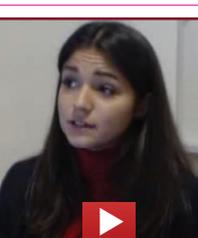
Organized social power in the form of formal social institutions



**I. Kolman**

Political and other institutions around us are becoming increasingly complex. Without the right understanding, people are unable to appreciate or

use liberal democracy. Even the educated are not educated for civic virtue. A solution to the multi-level, complex challenges we face today are de-bureaucratisation and re-politisation.



**M. Nešković**

Each individual is a unique source of dynamism and the social organization is the medium through which his or her capacity is expressed, spread and intensified.

An individual should be open to free exchange of ideas with the social environment through interactions and various types of cooperation for constructive exchange of ideas.



**J. Ramanathan**

All great leaders accomplish not on their individual strength, but by tapping into the power of society. They identify with the aspirations of all, and make

an organized effort to execute their strategy. If we codify and present that knowledge in our education system, we will empower every student to become an effective leader.



**R. Stefanescu**

Knowledge represents information, values, attitudes, skills, mentalities, norms, and behaviors. Education is the means to detain, maintain, transmit, enrich

and share knowledge. It starts from birth and undergoes lifelong continuous evolution. A responsible and accountable education decides the character of the society.



**E. Constantinescu**

The essential factor for the survival of the quality of democracy is the democratic conscience of those who choose freedom.

Democracy as a system for ensuring individual freedom is a fragile product. The answer regarding the future of freedom of democracy is a choice of each generation, and eventually, of each of us.



**G. Jacobs**

We have the science of Physics, Chemistry, Politics, Economics and many other academic streams that teaches us to accomplish in these individual streams.

But we do not have a science of human accomplishment, a fundamental goal that is behind every human endeavour. What we need is a science of accomplishment.



**I. Josipović**

Aristotle said that politics has the power to unite, create a spirit of community and shape the community. Music has identical power.

It is a means to mobilise and inspire the multitude, an escape from conformism and a method of political rebellion. It can be used to convey social messages and resist control.



**E. Hoedl**

Social power depends on the ownership of both material and immaterial properties, organisation of these properties and the values according

to which the properties and the organisations are handled.

Human-centred education is a powerful instrument to change values.

emerged from the unorganized social potential of individuals. The individual who conforms to social values is controlled by the society at the existing level. The individual who rises above the level of the existing social values attracts the whole of social power towards himself. Internalization of social values makes the power of the whole society available to the individual. Through this process an individual acquires social power, whether formal or informal, and becomes a leader. The quantity of social power that an individual can receive is limited only by his/her receptivity. Values increase his/her receptivity.

power. Nobel Laureates and other eminent intellectuals such as those who founded WAAS leverage their standing in society to influence and achieve results beyond their personal domain of action.

Well-known business leaders, outstanding sportsmen, cinema stars and other entertainers also exercise influence beyond their fields of direct action, as Steve Jobs transformed personal computer technology and Bill Gates campaigned for eradication of infectious diseases. Many of these instances are beneficial to the society. Business and civil society leaders in global governance today act as extra-national agents of power.

Different forms of social power are readily interconvertible. Each of the types and levels of social power interact with other types and levels. Political influence translates into money power and vice versa. Popularity can be converted into political, monetary and social power, etc. The combination of two or more forms of power multiplies their potential and creates new forms. The power of media exercises enormous influence over politics, business and finance. The technology of personal computers and telecommunications combine to create the Internet. The internet in turn has enabled many forms of power to interact and combine to form new sources of powers, as exemplified by Apple iTunes, Google, Amazon, Facebook, Uber, Bitcoin and others.

Money is a uniquely effective instrument for the inter-



**M. Chandrasekaran**

Money is a symbol that represents values.

It is a social organization that has an immense power for social productivity.

A right understanding of money can enable nations plagued by corruption to convert the destructive power of negative groups into constructive energies for nation building.

Formal centers often resist the emergence of informal sources because the latter challenge the authority of the formal centers and pose a threat to the existence of former. The refusal of established universities to recognize MOOCs is an example. Both formal centers and informal sources of social power are important and are needed for the efficient functioning of the society. Centers and sources are not competitors, contraries or enemies. They complement each other in providing service to the society.

Gorbachev exercised immense influence in the world positively far beyond his political power as President of the former Soviet Union even after he lost power. The remarkable role played by J.P. Morgan in averting financial collapse in 1907 at a time before the founding of the Federal Reserve System is a positive example of the exercise of informal social



**G. Bandov**

Informal education will play a critical role in this century, and social power is one of the most important topics we need to discuss today.

The WUC initiative to open up the subject for discussion to a global online audience is a significant step.

convertibility and exercise of social power. It is convertible into almost all forms of social power and almost all forms of social power can be converted into money. Money as a social organization has an immense power for social productivity. It is a symbol that represents values. Social and psychological values generate new money. The power of money arises not from any intrinsic value of its own. It arises from the complex social organization which supports its creation and utilization.

History shows that concentration of any power in the hands of a small group of people has always resulted in serious imbalance in the society. Our existing economic theories and social paradigms are inadequate to address plutocracy and achieve wider distribution of money.

The age of imperialism, commercialisation and colonialism and the theory of neoliberal free trade were based on the values of competitive security and competitive prosperity. But these values have brought us to the serious impasse we find ourselves in today.

The Social Power Lecture Series concluded that our new social structures require a foundation at a deeper level, at a level of values that are inclusive, cooperative and collaborative. Our ideology needs to be centered not merely on the unregulated market and unbridled freedom for speculation. It must have an inclusive global view that addresses the needs of all human beings as highlighted in the 17 Sustainable Development Goals of the United Nations.



*H. Gurgulino de Souza & G. Bandov*



*J. Engelbrecht & H. Schopper*



*E. Constantinescu & G. Jacobs*



*E. Hoedl & S. Bahia*



*From Left to Right: H. Gurgulino de Souza, E. Constantinescu, A. Zucconi, G. Jacobs & I. Josipović*



*From Left to Right: B. Gills, A. Zucconi, M. Đurović, H. Gurgulino de Souza & J. Caraça*

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# Future Education

## Fostering Innovation and Creativity



WUC participated in a conference on the theme “Harmonizing Business, Economy and Society” organized by the University of Tourism and Management in Skopje (UTMS) on October 5-6, 2016. **Ace Milenkovski**, founder and rector of UTMS and Associate Fellow of WAAS, inaugurated. The conference focused on human-centered economic and business

strategies with main emphasis on development of human and social capital and fostering innovation and creativity through education.

In his keynote address, **Garry Jacobs** described education as the most sophisticated instrument yet fashioned by society for its own conscious social evolution. Yet, ironically, evolution of the instrument itself lags far behind the evolution of the society it strives to promote. This lag is a natural result of the fact that human progress is largely a subconscious process occurring by trial and error.

The prevailing conception of what should be taught and how it should be taught remains mired in the distant past. In an age when information about virtually everything is available at our fingertips, the educational system continues to emphasize transfer of information as its predominant objective. It is time to pause and ask ourselves whether an entirely different conception of education is required.

It may sound naive to speak of a revolution in higher education, an institution which in its constitution and mode of functioning has remained immune to alteration by all the revolutions of the past in which it has itself played a crucial role as incubator for disruptive ideas, breakthrough technologies and impatient energies demanding radical change. The institution of higher education itself is still based on a pedagogy and technology



developed centuries ago. Therefore it is wise to recall that even the most visionary failed to conceive in 1995 of what the World Wide Web would become in a mere 20 years.

Imagine a global system in which every student can choose from thousands of courses offered by universities around the world and from among the top lecturers in the world on every subject with automatic translation into any language of choice. Imagine a system in which other institutions—research institutes, NGOs, companies, governmental and international organizations—can offer their own expertise and experience as course material through a process of backward integration from live practice to theoretical knowledge in the world’s virtual classroom. Imagine a system in which the often impermeable barriers between the university and society become a porous and dynamic marketplace for continuous exchange of ideas in both directions. To imagine these things is to envision a world in which all individuals have unprecedented opportunity to develop their own capacities for independent thinking, creativity, personality and individuality.

It is to envision a human-centered society in place of the technology, money and status-centered society in which we now live—a society which strives to develop and realize the full potential of every human being. That is indeed a dream today, but a dream that can soon be realized.

## RECENT TRENDS

### Finland reforms education to prepare children for the future

Finland’s education is highly regarded around the world and is ranked among the top when compared with other countries. Nonetheless, the Finnish Government plans to revamp the existing school curriculum and aims to implement an educational reform that will prepare the children with the skills necessary for today and the future. Instead of traditional subjects like Maths, History,

Geography... students will study topics and events of their own interest from the perspective of Math, History, Geography... The new system is introduced to students of age 16 and above. Students will work in groups instead of the traditional teacher-student setting. The change is already underway with teachers taking up preparatory work for the new system.

**Editorial Staff:** Vasugi Balaji, Latha Chandrasekaran, Janani Ramanathan, Shweta Rangan, Ranjani Ravi, Vani Senthil and Ranganayaki Somaskandan

# Future Education

## The Brain of the Future

The Altius Society at Oxford conducted a high level international conference on “The Brain of the Future” at Oxford University from September 30<sup>th</sup> to October 2<sup>nd</sup>, 2016. **Carlos Blanco**, Associate Fellow of WAAS, is co-founder of Altius and co-organizer of the conference. The event analyzed the impact of Artificial Intelligence from five different perspectives: science and technology, philosophy and the humanities, economics, geopolitics, and urbanism. It expanded beyond the neurobiological organization of the human brain, instead focusing on the need to examine the possibilities and consequences of the development of Advanced Intelligent Machines, the definition of human nature and consciousness, rapid increases of productivity of goods and services, shifts in the structure of our societies and cultures, major disruptions of global commerce and the balance of international power, growing income gaps driven by innovation, security risks posed by AI, and the requirement of a new paradigm of global governance.

Speakers included **Eric Maskin** (2007 Nobel laureate in Economics), **Gao Xingjian** (2000 Nobel laureate in Literature), **Lord Martin Rees** (former President, Royal Society), **Baroness Neville-Jones** (former Director, MI5 and MI6), and many other distinguished participants.



*Gao Xingjian & Carlos Blanco*

**Garry Jacobs**, CEO of WUC, presented the conclusions of the WUC-WAAS course on Mind, Thinking and Creativity conducted at Dubrovnik, Croatia last April emphasizing fundamental differences between the character of mental processes being reproduced by computers today and the higher order mental faculties for synthetic, integral, creative and intuitive thinking needed to address the pressing challenges confronting humanity today.

## RECENT TRENDS

### Moving from STEM to STEAM in four generations of Massive Open Online Courses: MOOC 4.0

MIT has launched u.Lab, a MOOC that combines both online and offline learning. It provides an o2o, or online to offline blended learning environment that combines the best of many learning models. This new model has been termed MOOC 4.0.

The first generation of MOOC, now dubbed MOOC 1.0, was the first online venture in education. Classroom lectures were simply recorded and made available to all. MOOC 2.0 saw the introduction of mass automated tests to add an element of interactivity to the learning experience. One of the major criticisms of online learning was the lack of person to person interaction and the human touch that is integral to all human learning. MOOC 3.0 tried to overcome that by introducing peer learning. Forums, discussion groups and peer review were added to every course. Study groups were formed using social networking sites. A student could have his/her answer sheets reviewed by other students, provided he/she evaluates other students' answers. This introduced the students to many other points of view. For every question a student raised in the online discussion, or answered, he/she received points. This motivated discussion.

The journey from MOOC 1.0 to 4.0 is a story of decentralization of the classroom and a deepening of the learning process. u.lab has seen the opening up of the classroom to many self-organized hubs around the world. Classes changed from the teacher-centric downloading model to a student-centric generative dialogue. The institution itself opened up to a

global innovation context while cultivating learning spaces that witnessed collective governance. Importance was given to learning modes through hands on action learning methodologies.

Local students gathered at these hubs every week to study and practise together. There were also 4 global live sessions that brought the global student group together at once. Like-minded youngsters came together, overcoming distances, to become part of a positive global movement. The u.lab course went beyond academic knowledge, towards self-transformation. It attempted to open up the deeper sources of human intelligence by activating an open mind, open heart and open will.

The first session of u.lab in early 2015 had 26,000 registered participants, and the second batch offered in September 2015 had 50,000. According to an exit survey, 93% of the students found their online learning experience inspiring or life changing!

Clearly, education can no longer revolve around the narrow concept of STEM (Science, Technology, Engineering, Math). The importance of the Arts has been widely recognized today. Attempts have been made to broaden STEM into STEAM by introducing the Arts.

u.lab is a first step in steering education towards the future by introducing the second version of STEAM that complements the first one: Social Technologies, Entrepreneurship, Aesthetics, and Mindfulness.

# Future Education

## Ethical Thinking in Higher Education\*



**Lennart Levi**

Trust in government is at an all-time low in many countries. In the UK, the Chilcot inquiry and the parliamentary expenses scandal have eroded faith in politicians. Internationally, we have also seen ethically dubious behaviour in the business world, for example in the Panama Papers and the Volkswagen scandal, and in international bodies such as FIFA.

All these events have left many people believing that elites lack an adequate ethical compass.

There is a perception that current society is deeply unjust because elites are not acting for the common good, but are instead arranging things to benefit themselves and their allies. The behaviour of economic and political elites is central to overall social cohesion. Unless those who lead and carry responsibility for society's key functions are perceived as honest and trustworthy, general trust in society will also fall. And a fairly high level of interpersonal trust is essential to a well-functioning and prosperous society.

These elites have one thing in common: they have almost without exception been trained at leading universities. In other words, there is not necessarily anything wrong with their knowledge, technical competencies and intellectual abilities. Instead, the deficiencies are in their ability to understand and practice ethical behaviour. Some universities and colleges have recently come to realise the importance of this issue. However, the central questions of ethics are either missing or given a very modest role in most higher education institutions.

Transparency International estimates that 6bn people live in countries with a serious corruption problem. Internationally, the health sector is particularly hard hit by corruption, from medical personnel requiring bribes to companies who sell fake medicines. One can literally say that many people in the world are dying of corruption. In addition, one of the main reasons that people say they are dissatisfied with their lives is that they perceive themselves to be living under unjust and corrupt public

institutions. The lack of ethics and the prevalence of corruption in the public sector is probably the biggest obstacle to social and economic development. Conversely, one can say that the most important asset of a society is the ethical quality of its public institutions.

The American political scientist Francis Fukuyama has argued that it is a "natural instinct" for people with a public position of power to use it to benefit his or her self, family, friends, clan, tribe, allies, co-ethnics or economic interest. To not indulge in favoritism, but to act impartially, in the public interest and in accordance with laws and regulations is, says Fukuyama, something that must be learned.

With this in mind, a few years ago we took up the issue with the Compostela Group of Universities, an international network of 68 higher education institutions. We recommended that they adopt a declaration on issues of ethics be included in all subject areas—for example, for doctors, economists, lawyers, teachers, economists, biologists, and so on. Our declaration was unanimously adopted at the network's General Assembly in Poznan in 2014, and has therefore been named the Poznan Declaration. It has since been supported by many other key organisations, including WAAS and WUC.

This initiative is now moving from vision to reality. We therefore urge all universities and colleges to make sure that ethics becomes an integrated part of all their educational programmes. When the next generation of leaders start meeting the challenges and dilemmas they will encounter, we must ensure that they have a working ethical compass.

**Lennart Levi**, *Emeritus Professor of Psychosocial Medicine; Fellow, World Academy of Art & Science*

**Bo Rothstein**, *Professor of Government & Public Policy, University of Oxford*



**Bo Rothstein**

## RECENT TRENDS

### Oxford University launches its first MOOC on edX

Though MOOC courses have grown in popularity and given access to learning to millions of students around the world, Oxford had not offered MOOCs until now.

From February 2017 it will offer an Economics course in partnership with the non-profit MOOC platform edX.

### Coursera adopts monthly subscription model

When other MOOC platforms charge for certificates per course, Coursera, one of the leading MOOC platforms, is adopting a monthly subscription model to encourage binge-learning. Earlier experiments with subscriptions made with a small section of students showed a two and a half times rise in the course completion rate.

\* Originally published in *Prospect Magazine* on November 18, 2016.

# Mathematical Intuition



“Some are born great, some achieve greatness, and some have greatness thrust upon them.” Shakespeare’s words can be interpreted to understand the intuitive thinking of Mathematicians. Some Mathematicians like Ramanujan are born with intuitive mathematical skills. His intuition led to pioneering discoveries in various areas of Mathematics,

but Ramanujan was never able to explain his thinking process. Henri Poincaré said, “It is by logic that we prove, but by intuition that we discover”. He believed that intuition provides a foundation for all of mathematics, and claimed that logic, which alone can give certainty, is the instrument of demonstration while intuition is the instrument of invention. He proposed a conjecture in 1904 that defines the shape of the universe that we live in. Grigori Perelman worked on Poincaré’s conjecture for eight years and solved one of Math’s greatest mysteries. He was awarded the Fields Medal in 2006. He declined all awards and prizes as he was not interested in money or fame and said that his efforts were no greater than that of Richard Hamilton, who pioneered to solve the Poincaré conjecture. Perelman is a genius not just on account of his thinking skills, but also for his values—honesty, integrity and hard work.

By making students understand the complementarity of logical and intuitive thinking, we can effectively make them original thinkers. When students can passionately view numbers as their friends, they will be addicted to learning the seemingly abstract entities. Kalid Azad, author of “*Math, Better Explained: Learn to Unlock Your Math Intuition*”, built a concrete method to teach abstract and complex mathematical concepts. He says that giving a context before detailing the principles and using analogies, diagrams and examples are efficient ways for better understanding and retention. Man created symbols to represent reality which helped to enhance thought process and communication. Symbolic thinking is utilitarian and helps in understanding higher levels of abstraction as well. Math is a language and we should develop an ear for the language, not just cram the symbols and rules. Describing number zero as the neutral zone where positive and negative forces cancel each other out or as the notion of non-doing adds meaning to the context. Kalid Azad says that unless you are comfortable in communicating any math concept in plain English, you will not develop an intuitive sense of the subject. He emphasizes the use of analogy and metaphor, as they relate new concepts with familiar ones and animate the process of learning. His website [betterexplained.com](http://betterexplained.com) has a huge reservoir of analogies for all mathematical concepts.

Learning math becomes a burden, when students lose the capacity to memorize the piling amount of equations or lose interest as they cannot relate to the information they are being taught. Websites like [betterexplained.com](http://betterexplained.com) and other online courses are a boon to enthusiastic learners. Learning involves insight and enthusiasm. Even when we are not naturally intuitive, we can learn if we are willing to learn.

**Vani Senthil**

*Research Associate, The Mother’s Service Society*

## Excerpts from the interview with Dr. Raj Raghunathan



Dr. Rajagopal Raghunathan designed one of the world’s most popular online courses, a MOOC offered by Coursera entitled ‘A Life of Happiness and Fulfillment’. He is Professor of Marketing at the McCombs School of Business at the University of Texas. WUC interviewed him in the midst of his world tour

sharing his experiences on how to develop and deliver successful educational content online.

1. *What are the major limitations of the current education system in preparing youth for life in the 21<sup>st</sup> century?*

Education systems vary by country and culture of course—e.g., the system in Germany, Netherlands and some other European countries allow for students to self select into “professional” vs. “skilled labor” tracks during high school. However, by and large, most education systems fail us by not providing an overarching framework for understanding why being educated is useful. I would imagine that most people would agree that education is useful because it helps enhance everyone’s well-being, and I think this overarching goal needs to be made explicit from Day 1 and reaffirmed through out one’s education. Courses on the topic of “well-being” need to find a way into the curriculum and should play a very central role.

2. *Is it possible to shift from a subject centered to person/student centered learning?*

Yes, we currently have the technology to be able to do so. Online platforms can more easily enable students to delve deeper into a particular topic of interest.

[Click here](#) to read more

# Upcoming Events

## Anticipation, Agency & Complexity

April 6-8, 2017, Trento, Italy



*The future is ever alive and shaping events that have yet to occur. And it is also shaping the future of science.*

Anticipation is a widespread phenomenon present in and characterizing all types of systems, forcing a re-evaluation of the very idea of science. The present interplay between science and institutions is becoming a major impediment to a further development of science. The traditional, bureaucratic structure adopted by organizations and institutions (e.g. governments) derives from an understanding of systems that precedes the discovery of both complexity and anticipation. These structures work as if problems could be addressed individually and in a piecemeal way, with outputs systematically proportionate to relevant inputs, and without any thorough exploration of possible futures. Agency and power are central to how we construct choices and take decisions in complex, anticipatory systems.

The First International Conference on Anticipation co-organized by University of Trento, UNESCO, WAAS-WorldAcademyofArtandScience, WUC-WorldUniversity Consortium and the Advanced Design Network at Trento in November 2015 succeeded beyond expectations. As a follow up, WAAS and WUC are now pleased to collaborate with the Department of Sociology and Social Research of the University of Trento, and the UNESCO Chairs in Anticipatory Systems to organize this workshop.

### SPECIAL SESSIONS

**WAAS & WUC on Global Challenges & the Need for New Thinking, April 6, 2017 (9:00-12:00)**

**Garry Jacobs:** Transdisciplinary Social Theory and Integrated Thinking

**Alberto Zucconi:** Agency and Resilience, Variables of an Effective People Centered Education Promoting Sustainable Governance

**Winston Nagan:** Social Science, Values and Intellectual Responsibility

**Elizabeth Paunović:** Health & Environment in WHO European Region: Creating Resilient Communities and Supportive Environments

**Donato Kiniger-Passigli:** Crisis Risk Management: Anticipating Change, Counteracting Fragility

**The UNESCO Chairs in Anticipatory Systems, April 7, 2017 (9:00-12:00)**

**Riel Miller:** The UNESCO Chairs in Anticipatory Systems and the Role of Futures Literacy

**Markku Wilenius:** Understanding Economic and Social Macro-Waves

**Sohail Inayatullah:** Macro-History Today

**Roberto Poli:** Pragmatic Utopia

[Click here](#) for more information.

## Previous Courses co-organized by WUC

The video recordings of the previous WUC-WAAS organized courses are available on the WUC website. Interested participants can apply for a certificate of participation by [contacting](#) the WAAS administrative team.



Individuality and Values in Social Evolution



Toward an Integrated Science of Society



**INVITATION FOR FACULTY MEMBERS**  
**Mind, Thinking & Creativity**  
 Inter-University Centre, Dubrovnik, Croatia  
 November 2017



Are all our mental perceptions and knowledge psychological constructions of reality? How do we see the limits of our conceptual system and move out of it? Is integral thinking the future of thinking? Is the mind as we know it a limited instrument? Can genius be learned? Can creativity be summarized by a formula?



In order to answer these questions and become more conscious of the creative powers of the mind so we can more effectively utilize its extraordinary capacities and avoid its characteristic blind-spots, WUC has co-organized a lecture series on the subject of Mind, Thinking and Creativity. This program will be held at IUC, Dubrovnik, Croatia in November 2017. It will be the 8<sup>th</sup> in a series of similar events, and build on an earlier program on the same subject organized in April 2016.

This program will be an exploration of the evolutionary development of our capacity for thinking, knowing, creating and accomplishing. It aims to broaden the range and enhance the quality of our thinking by making conscious the implicit assumptions and barriers that confine it within narrow boundaries and the characteristic types of errors and omissions they give rise to. It is an endeavour to enhance our capacity for rational, relevant, effective, independent and creative thinking, problem solving, decision making and accomplishment.

Those interested in participating as a faculty member or a participant may [contact](#) the WAAS Admin team. The course will be open for registration to students shortly.

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**Essence of Effective Leadership**



**Future Education**



**Mind, Thinking & Creativity**